MICROSOFT®
WINDOWS™

User's Guide

Microsoft® Works

The Tools That Help You Run Your Growing Business

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Microsoft® Works for Windows™

User's Guide

The tools that help you run your growing business
Windows™ Series

Microsoft Corporation

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Guide to the Word Processor

For a tutorial, press SHIFT+F1 and go to "Introducing the Word Processor" in the Word Processor and Draw section of the tutorial.

The Microsoft® Works for Windows™ Word Processor is a writing tool. You can use it to create any type of document: a letter to a client or business associate, a memo to fellow workers, a report for a business partner or for a teacher, and so on.

Although the Word Processor has many features to help you compose, organize, and polish your documents, you do not have to spend time learning about them before you begin.

As you use the Word Processor, however, you might find that you would like to do more, such as move words, sentences, and paragraphs; delete text and replace it with other text; center headings on a page; make certain words stand out from other text; and so on. You won't be disappointed. The Word Processor makes it possible to do this and much more. For example, you can include charts and drawings in a document, you can set Works to automatically number pages, and you can check your spelling and find synonyms when an idea is difficult to express.

To	See	On page
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	Highlighting to make changes	10
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Beginning a Word Processor document

Using the Word Processor is much like using a typewriter, but instead of immediately printing what you type, Works displays your work on the screen so that you can make sure it is exactly right before you print it. You can also save your work and continue it later.

You can begin a new Word Processor document when you start Works or at any time while using Works. Before you can start Works and create a document, you must install Works on your computer. For information on how to install and start Works, see "Installing Works on your computer" in *Getting Started.*

You can also open a document you previously created at any time while you are using Works.

To start Works and create a new document or open a previously saved document

To quickly display the Startup dialog box
You can also display the Works Startup dialog box by double-clicking anywhere in the Works workspace. The workspace is the area behind document windows.

1 In the Solution Series window group, double-click the Works program item.

Works displays the Startup dialog box.

2 Choose the Word Processor button to create a new document.
–or–
Choose the Open Existing File button to open a previously saved document.

To create a new document when Works is already started

1 From the File menu, choose Create New File.

Works displays the Create New File dialog box.

2 Choose the Word Processor button to create a new document.

A new document opens, and you can begin entering text and numbers.

To open an existing document when Works is already started

For information on opening and using the template files that come with Works, see "Jump right in" in *Getting Started.*

1. From the File menu, choose Open Existing File.
2. From the list of files in the Open dialog box, choose the document you want.
3. Choose the OK button.

Typing in the Word Processor

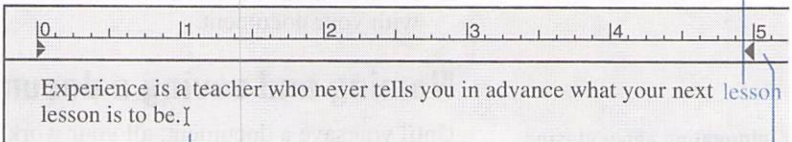
For a tutorial, press SHIFT+F1 and go to the "Entering text" lesson in the Word Processor and Draw section of the tutorial.

When you first create a document, the insertion point is at the top left of the document window. The insertion point marks your place in a document and indicates where the next character you type will appear. If you make a mistake while typing, you can delete it and retype the text. For more information, see "To correct a typing mistake" later in this topic.

Immediately below the insertion point is the end-of-file marker (—). The Word Processor always displays the end-of-file marker. It moves down as you type lines of text, and you cannot move the insertion point below it.

Works uses wordwrap to fit text on the screen. Wordwrap means that when you type a word that extends beyond the right-margin marker, Works automatically moves it to the next line.

Because the word "lesson" would extend beyond the right indent, Works automatically moves it to the next line.



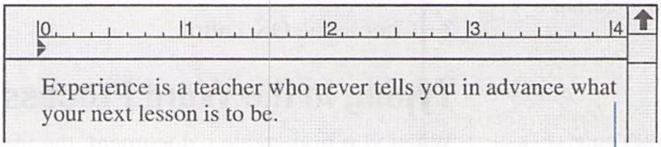
Experience is a teacher who never tells you in advance what your next lesson is to be.

Insertion point

Right-margin indent marker

If a document window is too narrow to display the right-margin marker, the document scrolls to the right when your typing reaches the window edge. If you do not want lines to extend beyond the window, turn on the

Wrap For Window command from the Options menu. Then Works ignores the right-margin indent and wraps text at the right edge of the window, regardless of the window's width. When printing, however, lines will still wrap at the right page margin.



Experience is a teacher who never tells you in advance what your next lesson is to be.

The Wrap For Window command causes text to wrap at the window's edge.

To wrap text at the edge of the window

▶ From the Options menu, choose Wrap For Window.

When Wrap For Window is chosen, a mark is displayed beside the command name on the Options menu. To turn off Wrap For Window, choose the command again.

Making corrections more quickly
If you want to correct a large amount of text, or if your error is not close to the insertion point, there are quicker ways to make corrections. For more information, see "Deleting text, charts, drawings, and other objects" on page 36.

To correct a typing mistake

1. Press BACKSPACE to move the insertion point backward, deleting a character each time you press it.
2. After you have deleted the mistake, type the correct text and continue with your document.

Naming and saving a document

For information about closing documents or quitting Works, see "Closing a document and quitting Works" on page 92.

Until you save a document, all your work is held in the computer's memory. This is temporary; a power interruption or turning off your computer will clear the computer's memory, and any work you haven't saved will be lost.

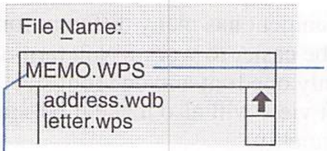
When you create a new document, Works gives it a name, such as Word1. You can change this to a name that better describes the contents of the document, such as REPORT.WPS.

To name and save a document for the first time

Renaming a document
If you want to, you can rename an open document. For more information, see "Naming, saving, duplicating, and reopening a document" on page 87.

1 From the File menu, choose Save.

2 In the File Name box, type a filename that is no more than eight characters.



File Name:

MEMO.WPS

address.wdb
letter.wps

The filename extension indicates the document type, such as .WPS for Word Processor.

A filename can contain eight or fewer characters.

You do not need to type the filename extension (.WPS). Works automatically adds it to the filename you type.

3 Choose the OK button.

You only need to name your document the first time you save it. The next time you choose the Save command, Works will not ask for a filename.

Save often
After saving a document for the first time, continue to save often during your work session to avoid losing your work due to equipment or power failure.

To save a document as you work

▶ From the File menu, choose Save.

Moving around in a document and viewing your work

For a tutorial, press SHIFT+F1 and go to the "Working with windows" and "Using the mouse" lessons in the Starting with computers section of the tutorial.

If a document contains more information than Works can display on the screen, you can move through the document to view your work.

If a document has many different fonts, font styles, tables, and so on, it might be easier to work if you turn on Draft View. In draft view, Works uses only one font and one font size. If your document is large, working in draft view will also make it possible to scroll from one place to another more quickly.

To turn on draft view

You can quickly move to a specific page or to a bookmark that you have set previously. For more information, see "Marking your place with bookmarks" on page 63.

- From the Options menu, choose Draft View.

When Draft View is chosen, a mark is displayed beside the command name on the Options menu. To turn off Draft View, choose the command again.

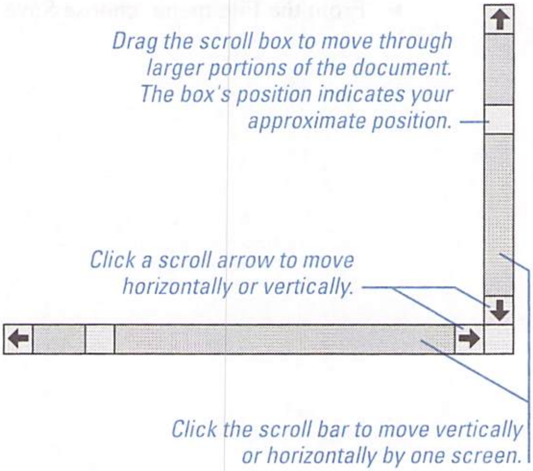
To move through a document

Seeing two parts of one document

You can split a document window and view two separate parts of a document at the same time. For more information, see "Viewing two parts of a document at one time" on page 8.

- Use one of the following methods:

Scrolling with the mouse



Drag the scroll box to move through larger portions of the document. The box's position indicates your approximate position.

Click a scroll arrow to move horizontally or vertically.

Click the scroll bar to move vertically or horizontally by one screen.

For a convenient list of all keyboard shortcuts, press ALT+H and choose Keyboard Shortcuts from the Help menu.

Differences in keyboards
Some keyboards label keys differently from those shown in this chart. For example, CTRL might be CONTROL, PAGE UP and PAGE DOWN might be PGUP and PGDN.

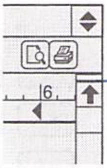
Scrolling with the keyboard

To scroll using the keyboard	Press this key	Key name
Left one character	←	LEFT ARROW
Right one character	→	RIGHT ARROW
Up one line	↑	UP ARROW
Down one line	↓	DOWN ARROW
Left one word	Ctrl ←	CTRL+LEFT ARROW
Right one word	Ctrl →	CTRL+RIGHT ARROW
Up one paragraph	Ctrl ↑	CTRL+UP ARROW
Down one paragraph	Ctrl ↓	CTRL+DOWN ARROW
To start of current line	Home	HOME
To end of current line	End	END
To beginning of document	Ctrl Home	CTRL+HOME
To end of document	Ctrl End	CTRL+END
Up one window	Page Up	PAGE UP
Down one window	Page Down	PAGE DOWN
To start of window	Ctrl Page Up	CTRL+PAGE UP
To end of window	Ctrl Page Down	CTRL+PAGE DOWN

Viewing two parts of a document at one time

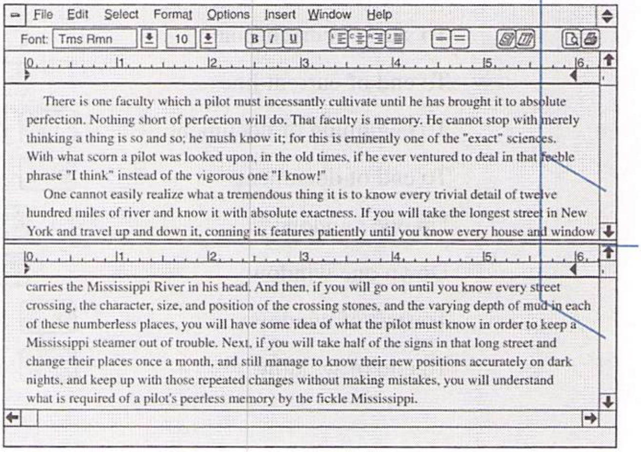
You can split a document window into two areas called panes. Each pane can show a different part of your document. This is helpful if you have a large document and want to refer to two different parts at the same time.

Viewing from either pane
After creating a split, you can move around and view any part of your document from either pane independently. You can also use commands such as Find and Go To from the Select menu to move to different parts of your document.



The split box is located to the right of the document window.

When you split the screen, Works provides separate scroll bars for each pane and you can scroll through each independently.



There is one faculty which a pilot must incessantly cultivate until he has brought it to absolute perfection. Nothing short of perfection will do. That faculty is memory. He cannot stop with merely thinking a thing is so and so; he mush know it; for this is eminently one of the "exact" sciences. With what scorn a pilot was looked upon, in the old times, if he ever ventured to deal in that feeble phrase "I think" instead of the vigorous one "I know!"

One cannot easily realize what a tremendous thing it is to know every trivial detail of twelve hundred miles of river and know it with absolute exactness. If you will take the longest street in New York and travel up and down it, conning its features patiently until you know every house and window

carries the Mississippi River in his head. And then, if you will go on until you know every street crossing, the character, size, and position of the crossing stones, and the varying depth of mud in each of these numberless places, you will have some idea of what the pilot must know in order to keep a Mississippi steamer out of trouble. Next, if you will take half of the signs in that long street and change their places once a month, and still manage to know their new positions accurately on dark nights, and keep up with those repeated changes without making mistakes, you will understand what is required of a pilot's peerless memory by the fickle Mississippi.

Split bar

When you insert or move a split, Works displays a bar that indicates the split location. You insert the split at the location you want by dragging the split bar.

To quickly insert or move a split

▶ With the mouse, drag the split box down to where you want the split.

To quickly remove the split

▶ Double-click the split bar.

To move between panes

- Click the pane you want to move to.
  –or–
  Press F6.

To insert, move, or remove a split

Splitting does not change text
Inserting or removing a split does not affect your document or its contents in any way.

1. From the Window menu, choose Split.

   If you do not currently have separate panes, Works displays a bar in the document window.

   If you already have separate panes, Works positions the split pointer over the split bar.

2. Press the UP ARROW or DOWN ARROW keys to move the split bar.

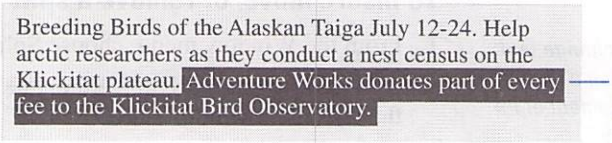
   If you want to remove the split, move the bar to the very top or bottom of the document window.

3. Press ENTER.

Highlighting to make changes

For a tutorial, press SHIFT+F1 and go to the "Moving and copying text" lesson in the Word Processor and Draw section of the tutorial.

There are many ways to change a document, such as making text bold, italic, or underlined; deleting or copying text; and so on. Before you can make changes, you must first highlight the information you want to change.



Breeding Birds of the Alaskan Taiga July 12-24. Help arctic researchers as they conduct a nest census on the Klickitat plateau. Adventure Works donates part of every fee to the Klickitat Bird Observatory.

This text is highlighted.

To highlight text or objects

▶ Choose a method from the following table for the text, range, or object you want to highlight.

To highlight	With the mouse	With the keyboard
Any amount of text, charts, or objects	Drag the pointer over the text or objects.	Hold down SHIFT and press the RIGHT ARROW or LEFT ARROW key.
A word	Double-click the word.	Move the insertion point to the word and press F8 twice.
A line	Click in the left margin of the document window beside the line.	Move the insertion point to the start of the line and press SHIFT+END.
A sentence	Drag the pointer over the sentence.	With the insertion point in the sentence, press F8 three times.
Several lines	In the left margin of the document window drag the pointer up or down.	Hold down SHIFT and press the DOWN ARROW or UP ARROW key.
A paragraph	Double-click in the left margin of the document window, beside the paragraph.	Move the insertion point to the paragraph and press F8 four times.
An entire document	Hold down CTRL and click in the left margin of the document window.	Press F8 five times.

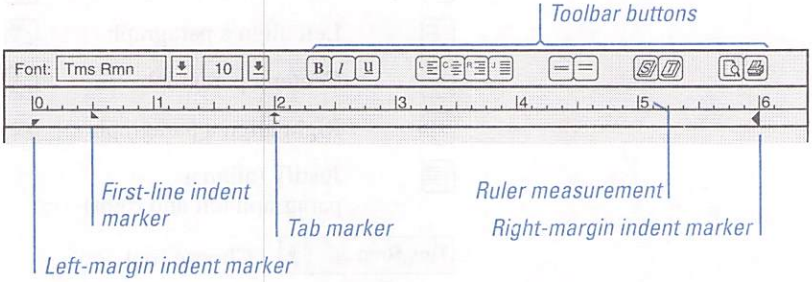
For a convenient list of all keyboard shortcuts, press ALT+H and choose Keyboard Shortcuts from the Help menu.

Canceling extended highlight
Works displays EXT (extended highlight) in the status bar when you press F8 to begin highlighting. To cancel the highlight, press ESC, and then an arrow key. To cancel a highlight made using the mouse, click the mouse button.

Speeding up your work with the Toolbar and ruler

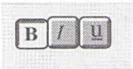
For a tutorial, press SHIFT+F1 and go to the "Formatting characters" lesson in the Word Processor and Draw section of the tutorial.

The Toolbar™ and ruler provide mouse shortcuts to many of the most commonly-used Word Processor commands. Initially, Works displays the Toolbar and ruler when you create a new document, but you can turn off the display if you would like more workspace.


Toolbar buttons
Font: Tms Rmn
10
B I U
0 1 2 3 4 5 6
First-line indent marker
Tab marker
Left-margin indent marker
Ruler measurement
Right-margin indent marker

On the Toolbar, with one click, you can change the appearance of highlighted characters, align paragraphs, or start an operation such as checking your spelling or printing your document.

Any time you highlight text you have formatted, the Toolbar button changes to show the font style or format of that entry.



The button appears pressed down, to indicate that the highlighted entry is bold.

On the ruler, you can drag indent markers to set and change indents, and you can insert tab stops with the click of a mouse button. If you want, you can work with ruler measurements in inches, centimeters, picas, or points.

Using the Toolbar

The following table illustrates each Toolbar button and its purpose.

Click	To	Click	To
B	Make text bold	═	Make lines single-spaced
I	Make text italic	☰	Make lines double-spaced
U	Underline text	✎	Start spelling checker
L≡	Left align a paragraph	✎	Start Thesaurus
C≡	Center a paragraph	🔍	Switch to print preview
R≡	Right align a paragraph	🖨	Start printing
J≡	Justify (align a paragraph left and right)		
Tms Rmn ↓	Choose font		
10 ↓	Choose character size		

To hide or show the Toolbar

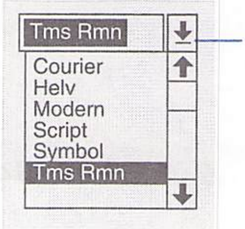
▶ From the Options menu, choose Show Toolbar.

When Show Toolbar is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Toolbar, choose the command again.

To quickly change fonts, font styles, or paragraph alignment

1 Highlight the characters or paragraph you want to change.

2 On the Toolbar, click the button for the command you want to choose.
–or–
If you are changing font or font size, click the Font box arrow or Font Size box arrow, and then choose the font or font size from the list Works displays.



Click the Font box arrow to display a list of available fonts.

To quickly check spelling, find a synonym, or preview or print a document

▸ On the Toolbar, click the button for the command you want to choose.

For more information about the commands you can choose from the Toolbar, see the following topics.

For information on	See page
Indenting paragraphs to visually organize a document	18
Setting alignment to visually organize paragraphs	22
Changing text appearance and size	23
Setting line and paragraph spacing	45
Checking spelling and using the Thesaurus	60
Previewing a document before printing	67
Printing a document	72

Using the ruler

For a tutorial, press SHIFT+F1 and go to the "Working with columns and tabs" lesson in the Word Processor and Draw section of the tutorial.

The ruler can indicate paragraph and tab stop positions in inches, centimeters, picas, or points. Use the ruler measurement with which you are most familiar or that gives the precision you want.

When the ruler is displayed, you can change paragraph indents by dragging the ruler indent markers and you can insert and change left-, right-, center-, or decimal-aligned tabs. For more information, see "Indenting paragraphs to visually organize a document" on page 18 and "Using tabs to create tables and lists" on page 26.

Ruler units
This is how the measurement units compare:

One inch

One centimeter (2.54 per inch)

One pica (6 per inch)

One point (72 per inch)

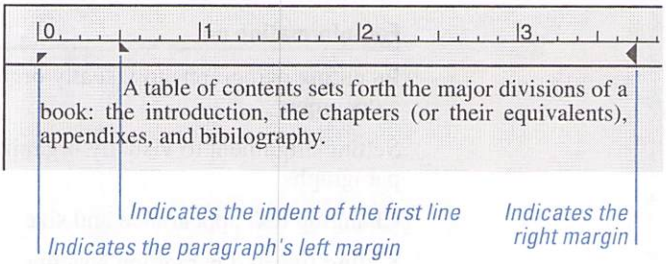
To hide or show the ruler

▸ From the Options menu, choose Show Ruler.

When Show Ruler is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Ruler, choose the command again.

To quickly change paragraph indents

1. Highlight each paragraph you want to change.
2. On the ruler, drag the indent marker (first-line, left, or right) for the indent you want to change.



A table of contents sets forth the major divisions of a book: the introduction, the chapters (or their equivalents), appendixes, and bibilography.

Indicates the indent of the first line

Indicates the right margin

Indicates the paragraph's left margin

The highlighted paragraph or paragraphs change to show the new indentation.

To quickly insert a left tab stop

1. Highlight each paragraph for which you want to insert a new left tab stop.
2. On the ruler, click where you want to insert the tab.

   Works inserts a left tab stop marker at that location.

For more information about inserting all types of tab stops, see "Using tabs to create tables and lists" on page 26.

To quickly move an existing tab stop

1. Highlight each paragraph for which you want to change the tab stop.
2. On the ruler, drag the tab stop marker to a new location.

To change measurement units

1. From the Options menu, choose Works Settings.
2. Under Units, choose Inches, Centimeters, Pica, or Points.
3. Choose the OK button.

When you type measurements *Works uses the units displayed on the ruler if you type measurements and do not indicate a specific type. To indicate a different unit, use its abbreviation when you type the measurement, for example: 0.5in, 1.27cm, 6pi, or 36pt.*

Undoing changes

For a tutorial, press SHIFT+F1 and go to the "Moving and copying information" lesson in the Word Processing and Draw section of the tutorial.

The Undo command can reverse a typing, editing, or formatting change, but only if you choose Undo immediately after making the change. For example, if you accidently delete some text, immediately choose Undo to restore it.

Undo can reverse the following changes:

Use Undo when	To
Typing	Remove typed characters, back to the location from which you last moved the insertion point
Editing	Reverse the effect of the Edit menu commands—Cut, Copy, Paste, and Delete
Formatting	Reverse the effect of any font style commands (such as Bold, Italic, and Underline), paragraph alignment commands (such as Right or Center), paragraph borders, and paragraph spacing
Checking spelling	Reverse all changes made during a spelling check
Using the Thesaurus	Reverse the effect of a change made using the Thesaurus
Finding and replacing	Reverse the last change made when doing a replace operation—or reverse all changes if you choose the Replace All button.

To undo the last change

▶ From the Edit menu, choose Undo.
–or–
Press ALT+BACKSPACE.

Adding text, paragraphs, and lines

For a tutorial, press SHIFT+F1 and go to the "Entering text" lesson in the Word Processor and Draw section of the tutorial.

An advantage to using a word processor instead of a typewriter is that you can insert new text anywhere in your document at any time. What happens to existing text when you insert new characters depends on certain Word Processor settings. For example, the Word Processor is initially set to insert new text between characters, words, lines, and paragraphs without deleting any of the existing text.

However, if you want, you can set the Word Processor to:

- Delete any highlighted text when you type new text.
- Delete the character to the right of the insertion point as you type new text.

Inserting text into other text

Seeing all the characters in your document
Works has characters or marks to indicate new paragraphs (¶) and new lines (↵). To display these and other special characters, choose Show All Characters from the Options menu. For more information, see "Viewing and inserting special characters" on page 40.

When you insert new text into existing text, Works moves the characters to the right of the insertion point to make room for the new text as you type it.

To insert new text into existing text

1 Move the insertion point to where you want to type text.

2 Begin typing.

To insert a new paragraph

▶ Press ENTER.

To insert a blank line

▶ Press ENTER twice.

To start a new line without starting a new paragraph

▶ Press SHIFT+ENTER.

Replacing highlighted text when you type

Some typists find that making changes to a document is easier if they set Works to automatically delete highlighted text when they begin typing new text.

To set Works to replace highlighted text

▶ From the Options menu, choose Typing Replaces Selection.

When Typing Replaces Selection is chosen, a mark is displayed beside the command name on the Options menu. To turn off Typing Replaces Selection, choose the command again.

To replace highlighted text with new text

1. With Typing Replaces Selection turned on, highlight the text you want to replace.
2. Type the new text.

   As soon as you begin typing, Works deletes the highlighted text and moves any other text to the right of the insertion point to make room for the new text.

Overtyping existing text

Sometimes it is easier to make changes to a document if you can automatically replace the characters to the right of the insertion point as you type new text. That way, you do not have to take the time to highlight or delete the text before typing.

To set Works to type over existing text

▶ Press INS.
–or–
From the Options menu, choose Overtype.

When Overtype is chosen, a mark is displayed beside the command name on the Options menu. To turn off Overtype, choose the command again.

To replace existing text as you type

1. Move the insertion point to where you want the new text.
2. Begin typing.

   Each time you type a character, Works deletes the character to the right of the insertion point.

Indenting paragraphs to visually organize a document

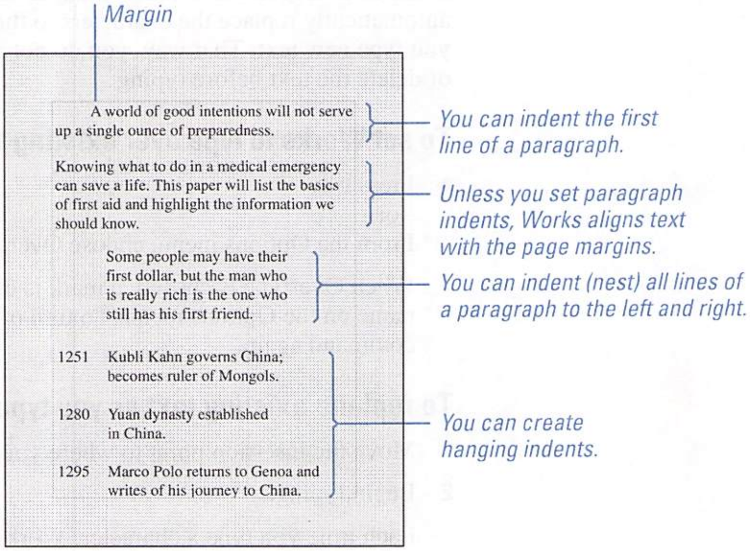
For a tutorial, press SHIFT+F1 and go to the "Formatting paragraphs " lesson in the Word Processor and Draw section of the tutorial.

Indents control the space between page margins and the lines in a paragraph. For example, setting a larger right indent increases the blank space to the right of the paragraph. By setting a first-line indent, you cause the first line of a paragraph to start to the right of all the other lines.

Indents help make a document easier to read. For example:

- You can group lists of related items using bulleted or numbered hanging indents.
- You can create outlines, show levels of importance, and set quotations apart with nested indents.
- You can make individual paragraphs easier to recognize using first-line indents.

Presetting indents
If you set an indent at the beginning of a paragraph before you begin typing, that paragraph and subsequent paragraphs you type will have the same indent until you change the setting.



Margin

A world of good intentions will not serve up a single ounce of preparedness.

Knowing what to do in a medical emergency can save a life. This paper will list the basics of first aid and highlight the information we should know.

Some people may have their first dollar, but the man who is really rich is the one who still has his first friend.

1251 Kubli Kahn governs China; becomes ruler of Mongols.

1280 Yuan dynasty established in China.

1295 Marco Polo returns to Genoa and writes of his journey to China.

You can indent the first line of a paragraph.

Unless you set paragraph indents, Works aligns text with the page margins.

You can indent (nest) all lines of a paragraph to the left and right.

You can create hanging indents.

Works can automatically give paragraphs a hanging indent, and it can automatically set indents for nested paragraphs. In addition, you can set your own indents for any paragraph.

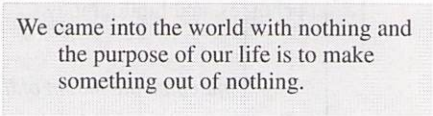
Setting hanging and nested indents

The first line of a hanging indent begins farther to the left than the rest of the lines. Use hanging indents for bulleted or numbered lists.

A nested paragraph is one that has a greater left indent than the paragraph before it. Use nested paragraphs in outlines and for long quotations in an essay or report.

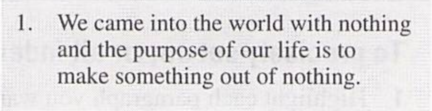
To quickly set a hanging indent

1. Highlight each paragraph you want to indent.
2. Press CTRL+H.



We came into the world with nothing and the purpose of our life is to make something out of nothing.

Works automatically creates a hanging indent of 0.5 inches.



1. We came into the world with nothing and the purpose of our life is to make something out of nothing.

Type a number or other character, and then press TAB to create a numbered or bulleted list.

To quickly set a nested indent

1. Highlight each paragraph you want to indent.
2. Press CTRL+N once for each level of indent you want.

   Works indents all lines in a nested paragraph by 0.5-inch increments each time you press CTRL+N.

To quickly undo a hanging or nested indent

1. Highlight each paragraph you want to change.
2. Press CTRL+G to undo a hanging indent.
   –or–
   Press CTRL+M to undo a nested indent.

   Works removes one level of indent.
3. If the paragraph or paragraphs are indented more than one level, repeat step 2 for each level you want to remove.

Setting your own paragraph indents

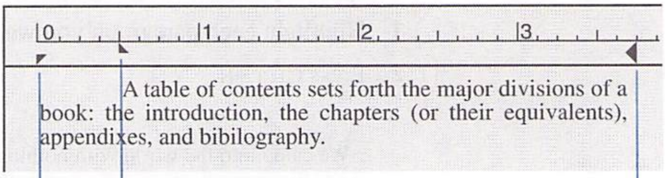
By setting your own indents, you can give paragraphs different indents than those set automatically, and you can also set first-line and right indents.

To quickly set an indent

Ruler units
While working with indents, use the ruler measurement with which you are most familiar or that gives the precision you want. For more information on setting ruler units, see "Using the ruler" on page 13.

1 Highlight each paragraph you want to indent.

2 On the ruler, drag an indent marker to the new position.



A table of contents sets forth the major divisions of a book: the introduction, the chapters (or their equivalents), appendixes, and bibilography.

Indicates the indent of the first line

Indicates the paragraph's left margin

Indicates the right margin

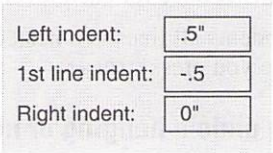
To precisely set any or all indents at one time

1 Highlight each paragraph you want to indent.

2 From the Format menu, choose Indents & Spacing.

Typing precise indents
If you want the indents at precise locations, you can type precise measurements, for example, 0.33in.

3 In the Left Indent, 1st Line Indent, and Right Indent boxes, type the measurements you want.



Left indent: .5"
1st line indent: -.5
Right indent: 0"

Type measurements in inches (.5"), centimeters (1.27cm), picas (3pi), or points (36pt).

4 Choose the OK button.

To set a custom hanging indent

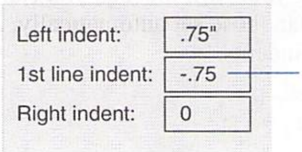
Setting a hanging indent with the mouse
You can also set a hanging indent using the mouse: hold down the SHIFT key and, on the ruler, drag the left margin indent marker to the right.

1 Highlight each paragraph you want to indent.

2 From the Format menu, choose Indents & Spacing.

3 In the Left Indent and 1st Line Indent boxes, type the indents you want.

In a hanging indent, the first-line indent is always a negative number so that the first line will start to the left of the left indent.



Left indent: .75"
1st line indent: -.75
Right indent: 0

In the 1st Line Indent box, type the same number you typed in the Left Indent box, but precede it with a minus sign.

4 Choose the OK button.

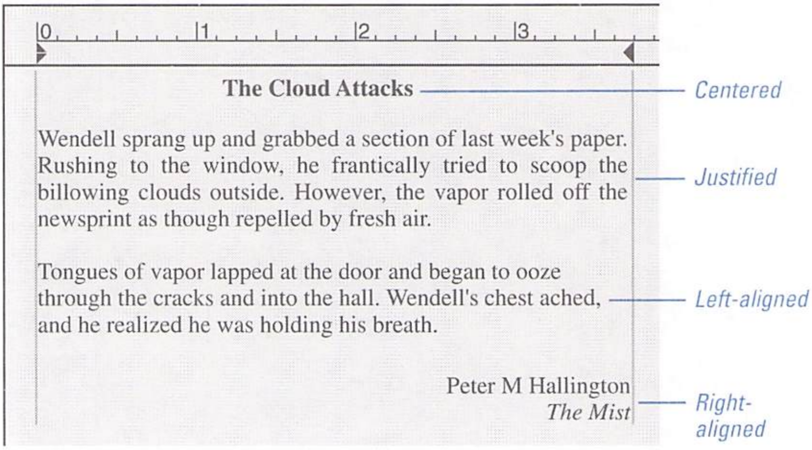
To remove one or more indents

1. Highlight each paragraph from which you want to remove indents.
2. From the Format menu, choose Indents & Spacing.
3. For each indent you want to remove, type **0** (zero) in that box.
4. Choose the OK button.

Setting alignment to visually organize paragraphs

For a tutorial, press SHIFT+F1 and go to the "Formatting paragraphs" lesson in the Word Processor and Draw section of the tutorial.

The way your paragraphs are aligned on a page can affect how a document looks and how easy it is to read. Unless you specify otherwise, Works left-aligns the paragraphs you type. However, you can also align paragraphs right, justified, or centered.



The Cloud Attacks

Wendell sprang up and grabbed a section of last week's paper. Rushing to the window, he frantically tried to scoop the billowing clouds outside. However, the vapor rolled off the newsprint as though repelled by fresh air.

Tongues of vapor lapped at the door and began to ooze through the cracks and into the hall. Wendell's chest ached, and he realized he was holding his breath.

Peter M Hallington
The Mist

Before you type
If you are at the beginning of a new paragraph, and you change the alignment before you begin typing, that paragraph and all subsequent paragraphs you type will have the new alignment until you change it again.

Works aligns a paragraph between the page margins or, if the paragraph has indents set, Works aligns it between those indents.

To quickly align one or more paragraphs

1 Highlight each paragraph you want to align.

2 On the Toolbar, click the button for the alignment you want.
–or–
Press the shortcut keys for the alignment you want.

To	Click	Press
Align left	L	CTRL+L
Align right	R	CTRL+R
Center	C	CTRL+E
Justify	J	CTRL+J

For a convenient list of all keyboard shortcuts, press ALT+H and choose Keyboard Shortcuts from the Help menu.

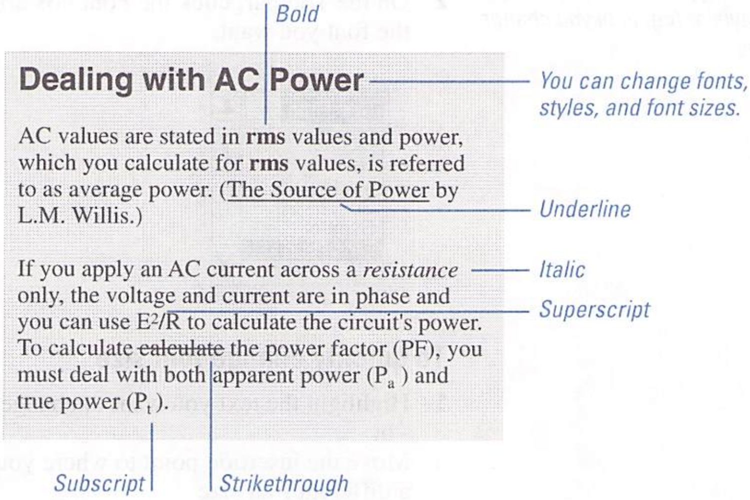
Changing text appearance and size

For a tutorial, press SHIFT+F1 and go to the "Formatting characters" lesson in the Word Processor and Draw section of the tutorial.

Printer fonts

The fonts and font sizes you can choose depend on the printer you are using. To see the fonts and font sizes available for your printer, click the Font box and Font Sizes box arrows on the Toolbar.

By changing the way text looks in a document, you can draw attention to key words and ideas, make the meanings of words and paragraphs clearer, and show changes you have made.


Bold
You can change fonts, styles, and font sizes.
Underline
Italic
Superscript
Subscript
Strikethrough

Dealing with AC Power

AC values are stated in **rms** values and power, which you calculate for **rms** values, is referred to as average power. (The Source of Power by L.M. Willis.)

If you apply an AC current across a *resistance* only, the voltage and current are in phase and you can use E^2/R to calculate the circuit's power. To calculate ~~calculate~~ the power factor (PF), you must deal with both apparent power (P_a) and true power (P_t).

To quickly make text bold, italic, or underlined

If bold, italic, and other styles do not print

If your printer cannot print a style, such as italic or bold, the characters will print as normal text. See your printer manual for information about its fonts and font styles.

1 Highlight the text you want to format.
–or–
Move the insertion point to where you want to type the formatted text.

2 On the Toolbar, click the button for the style you want.
–or–
Press the shortcut keys for the style you want.

To	Click, or	Press these keys
Make an entry bold	**B**	CTRL + B
Make an entry italic	*I*	CTRL + I
Underline an entry	u	CTRL + U
Return to plain text		CTRL + SPACEBAR

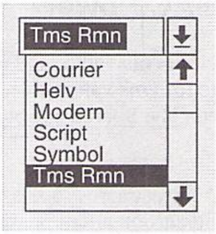
To quickly change fonts

Presetting font styles while typing

If you change a font style or font and then start typing, the text that you then type will have the new font style or font until you change it again.

1 Highlight the text you want to change.
–or–
Move the insertion point to where you want to type new text using a different font.

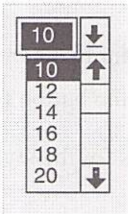
2 On the Toolbar, click the Font box arrow and then click the name of the font you want.



To quickly change font size

1 Highlight the text you want to change.
–or–
Move the insertion point to where you want to type the new text using a different font size.

2 On the Toolbar, click the Font Size box arrow and then click the font size you want.



To change both fonts and font sizes at the same time

1 Highlight the text you want to change.
–or–
Move the insertion point to where you want to type the new text using a different font or font size.

2 From the Format menu, choose Font & Style.

3 In the Font and Size boxes, choose the font and size you want.

4 Choose the OK button.

To make text superscript or subscript

1 Highlight the text you want to make superscript or subscript.
–or–
Move the insertion point to where you want to type superscript or subscript.

2 To make the text superscript, press CTRL+SHIFT+=(equal sign).
–or–
To make the text subscript, press CTRL+= (equal sign).

To make text strikethrough

1 Highlight the text you want to make strike through.
–or–
Move the insertion point to where you want to type strikethrough.

2 From the Format menu, choose Font & Style.

3 Under Style, choose the Strikethrough check box.

4 Choose the OK button.

Using tabs to create tables and lists

For a tutorial, press SHIFT+F1 and go to the "Working with columns and tabs " lesson in the Word Processor and Draw section of the tutorial.

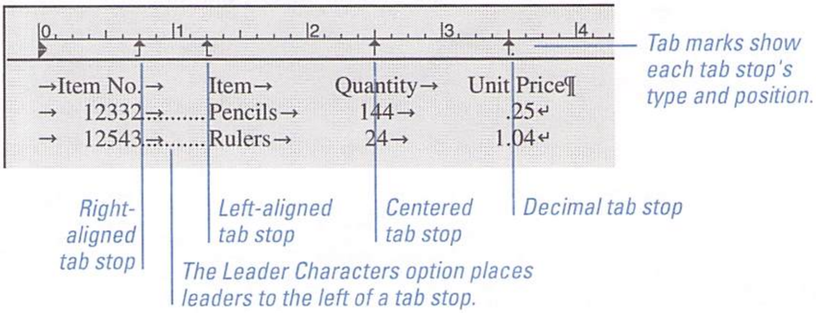
Tab stops align columns in a table or a list. When you press the TAB key, Works inserts a tab mark (→) in the document and moves the insertion point to the next tab stop on the current line.

Works displays the tab stops for the current paragraph or paragraphs on the ruler. The stops can be left-, right-, center-, or decimal-aligned, as shown in the following illustration.

Tab stops can also have several types of leader characters. Leader characters connect the items in one column with the items in the previous column. They can be dots (.....), dashes (-----), double dashes (====), or underline characters (___). If you do not select a leader character, Works leaves the space between columns blank.

Displaying ruler and tab marks
If Works does not display the ruler on the screen, choose Show Ruler from the Options menu. If you cannot see tab marks in a document, choose Show All Characters from the Options menu.

Works locates preset tab stops every 0.5 inch. You can change the spacing of preset tab stops, and you can insert custom tab stops. When you insert a custom tab stop, Works deletes any preset tab stops to the left of it.



```
→Item No.→    Item→      Quantity→   Unit Price¶
→   12332→.......Pencils→     144→        .25↵
→   12543→.......Rulers→       24→       1.04↵
```

Tab marks show each tab stop's type and position.

Right-aligned tab stop

Left-aligned tab stop

Centered tab stop

Decimal tab stop

The Leader Characters option places leaders to the left of a tab stop.

Creating a table

Preset tabs
Preset tab stops are initially set at every one-half inch.You can change the spacing of preset tab stops, or, if you insert custom tab stops, Works uses those instead of its preset tab stops.

Preset tab-stop marker

Before creating a table, determine how many columns you need, the width of each column, and which type of tab stop will work best. Then insert the tab stops. Some types of tables you might want to create are:

- A simple list of items extending over several columns. For example:

Items on hand

Nails	Screws	Staples
Hammer	Drill	Plane

- A list of items arranged in rows. For example:

Number	**Item**	**Quantity**
HW44132	Vamps	13
HW44138	Counters	4

- A list where items in a column might be of varying length. For example, a table of contents:

The effects of brain inactivity on day dreams
While gossiping .... Page 14
While watching TV from a stuffed chair ...... Page 21
While arguing politics .... Page 27

To quickly insert a left tab stop

1 Highlight each paragraph in which you want a tab stop.

2 Click the ruler at the position where you want to insert a tab stop.

3 To add another left tab stop, click the ruler again.

Setting tab stops before typing
If you are at the beginning of a new paragraph when you insert tab stops, that paragraph and all subsequent paragraphs you type will have the same tab stop settings until you change them.

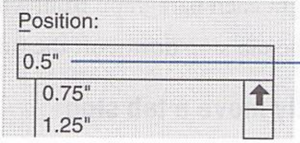
To insert any number of tab stops and assign leader characters

1 Highlight each paragraph in which you want a new tab stop.

2 Double-click the ruler where you want a tab stop.
–or–
From the Format menu, choose Tabs.

Works displays the Tabs dialog box.

3 In the Position box, type the position you want for the tab stop.


Position: 0.5"

Type the value in inches (.5"), centimeters (1.27cm), picas (3pi), or points (36pt).

4 Under both Alignment and Leader, choose the options you want.

5 Choose the Insert button.

6 Repeat steps 3 through 5 to insert as many tab stops as you want.

7 Choose the Close button.

Typing measurement values
Works can show inch, centimeter, pica, or point measurements on the ruler. If you do not specify a unit when typing measurements, Works assumes the current ruler unit. You can change the ruler unit with the Works Settings command from the Options menu.

To create a table

1. Move the insertion point to where you want the table.
2. Insert a tab stop for each column in the table.

   Use decimal-aligned or right-aligned tab stops for columns of numbers. The illustration on page 26 shows the effect of different types of tab stops.
3. Type the text for the table, pressing TAB to begin each new column.

   If your first tab stop has center, decimal, or right alignment, press TAB before you begin typing.
4. To start a new line in the table, press SHIFT+ENTER and type the information for that line.

   Pressing SHIFT+ENTER makes it possible for you to format the entire table as one paragraph.

Quick tables
Because the Spreadsheet is arranged in columns and rows, it can be quicker to create tables there and then copy them into the Word Processor. When you do, Works inserts tabs between the column entries. If necessary, move the tab stops to space columns properly.

Sorting tables or lists
You can sort a table or list by copying it to a spreadsheet, using the Spreadsheet's Sort Rows command from the Select menu, and then copying the sorted data back into your Word Processor document.

Changing an existing table

After creating a table, you might find that it is not aligned the way you want, or that it has too many or too few columns. You can make changes to the table's format by moving, inserting, or removing tab stops.

To quickly remove a tab stop

1. Highlight each paragraph from which you want to remove a tab stop.
2. Drag the tab stop down, off the ruler.

To quickly move a tab stop

1. Highlight each paragraph containing the tab stop you want to move.
2. On the ruler, drag the tab stop to a new position.

To remove several tab stops at one time

1. Highlight each paragraph containing the tab stops you want to remove.
2. From the Format menu, choose Tabs.
3. From the list of tab stops, choose the one you want to delete.
4. Choose the Delete button.
   –or–
   To delete all the custom tab stops, choose the Delete All button.
5. Repeat steps 3 and 4 to remove as many tab stops as you want.
6. Choose the Close button.

To move several tab stops at the same time

1. Highlight each paragraph containing the tab stops you want to change.
2. From the Format menu, choose Tabs.
3. From the list of tab stops, choose the one you want to move.
4. Choose the Delete button.
5. In the Position box, type a new measurement.
6. Choose the Insert button.
7. Repeat steps 3 through 6 to move as many tab stops as you want.
8. Choose the Close button.

To change both alignment and leader characters at the same time

1. Highlight each paragraph for which you want to change tab stop alignment, leader characters, or both.
2. From the Format menu, choose Tabs.
3. In the list of tab stops, choose the one you want to change.
4. Choose a new alignment or leader character, or both.
5. Choose the Insert button.
6. Repeat steps 3 through 5 to change the alignment or leader character for as many tab stops as you want.
7. Choose the Close button.

To add a column to a table

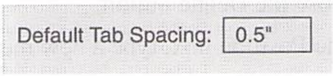
1. Highlight the entire table.
2. Insert a new tab stop with the correct alignment and leader character at the location where you want a new column.
3. As needed, change the position of any tabs stops that are positioned after the new tab stop.
4. At the position of the new tab stop, insert a tab mark and type the new text for each line in your table.

Changing preset tab stops

If you plan to type tables that will have the same width for most or all their columns, you might find it easiest to change the positioning of the Works preset tab stops.

To change the distance between preset tab stops

1. From the Format menu, choose Tabs.
2. In the Default Tab Spacing box, type the new distance you want between preset tab stops.



Default Tab Spacing: 0.5"

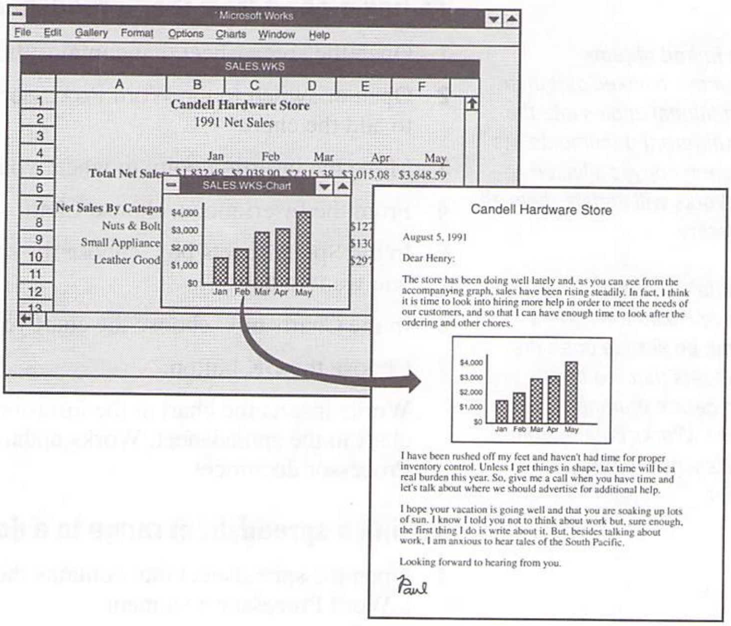
Type measurements in inches (0.5in), centimeters (1.27cm), picas (3pi), or points (36pt).

3. Choose the OK button.

Adding charts, drawings, and other objects

For a tutorial, press SHIFT+F1 and go to the "Adding drawings" lesson in the Word Processor and Draw section of the tutorial and to the "Sharing information" lesson in the Using tools together section of the tutorial.

Charts, drawings, graphics, and other objects make your documents more attractive and informative. For example, you can include in your letter sales figures from your monthly sales spreadsheet.


Microsoft Works
File Edit Gallery Format Options Charts Window Help
SALES.WKS
A B C D E F
1 Candell Hardware Store
2 1991 Net Sales
4 Jan Feb Mar Apr May
5 Total Net Sales $1,832.48 $2,038.90 $2,815.38 $3,015.08 $3,848.59
7 Net Sales By Categor
8 Nuts & Bolt $127
9 Small Appliance $130
10 Leather Good $297
SALES.WKS-Chart
$4,000
$3,000
$2,000
$1,000
$0
Jan Feb Mar Apr May

Candell Hardware Store

August 5, 1991

Dear Henry:

The store has been doing well lately and, as you can see from the accompanying graph, sales have been rising steadily. In fact, I think it is time to look into hiring more help in order to meet the needs of our customers, and so that I can have enough time to look after the ordering and other chores.

I have been rushed off my feet and haven't had time for proper inventory control. Unless I get things in shape, tax time will be a real burden this year. So, give me a call when you have time and let's talk about where we should advertise for additional help.

I hope your vacation is going well and that you are soaking up lots of sun. I know I told you not to think about work but, sure enough, the first thing I do is write about it. But, besides talking about work, I am anxious to hear tales of the South Pacific.

Looking forward to hearing from you.

Paul

You can:

For information on copying objects to other applications, see "Sharing information with other applications" on page 84.

- Copy objects. Copied objects do not change unless you delete or replace them. Copied objects and text are discussed in "Copying and moving text, charts, objects, formats, and styles" on page 37.
- Link objects. Linked objects remain joined to the document from which they were copied. They change automatically if someone changes the document from which they were copied. Link information when you want to be sure your document always has the latest version.
- Embed objects. Embedded objects let you start the application that created them and make changes to the object while you are working in a document.

Linking information to a document

When you link information, it remains linked to its original document. If you or anyone else changes the original object, Works automatically updates the information in your document. You can link charts from the Works Spreadsheet, a complete spreadsheet or portions of one, or objects from any other Windows version 3.0 or later application that is capable of linking. Check your application's documentation for more information.

After you add linked information to a document, Works makes sure it is always up-to-date.

To link a chart from the Spreadsheet

1. Open the spreadsheet that contains the chart you want to add.
2. Open or switch to the Word Processor document into which you want to add the chart.
3. Move the insertion point to where you want to add the chart.
4. From the Insert menu, choose Chart.
5. In the Spreadsheets box, choose the spreadsheet containing the chart you want to add.
6. In the Charts box, choose the chart you want to add.
7. Choose the OK button.

   Works inserts the chart at the insertion point. Anytime you change the chart in the spreadsheet, Works updates the chart in the Word Processor document.

Copying linked objects
You can move a linked object or insert additional copies into the same or different documents. As long as each copy is a linked object, Works will update them all as necessary.

Printing linked charts
If you have linked charts in a document, be sure to open the spreadsheets that the charts are linked to before printing. Otherwise, Works cannot print the charts when it prints the document.

To link a spreadsheet range to a document

1. Open the spreadsheet that contains the information you want to add to a Word Processor document.
2. Highlight the range of cells you want to add to a document.
3. From the Edit menu, choose Copy.
4. Open or switch to the Word Processor document into which you want to add the spreadsheet information.
5. Move the insertion point to where you want Works to insert the information.
6. From the Edit menu, choose Paste Special.
7. In the Paste Special dialog box, choose the Paste Link button.

   Works inserts the linked range at the insertion point. Anytime you change the information in the spreadsheet, Works updates the link in the Word Processor document.

To change a link to a manual link

1. In the Word Processor document, highlight the information you want to change the link for.
2. From the Edit menu, choose Links.
3. In the Links dialog box, choose the Manual option button.
4. Choose the OK button.

   To change a manual link back to an automatic link, follow the same steps in the preceding procedure, but choose the Automatic option button in step 3.

To link information from another Windows application

1. Open or switch to the Windows application that contains the information you want to add.
2. Highlight the information you want to add (a drawing, picture, cells, text, and so on).
3. Choose the application's Copy command. Copy is usually found on the Edit menu.
4. Open or switch to the Word Processor document into which you want to add the information.
5. Move the insertion point to where you want to add the information.
6. From the Edit menu, choose Paste Special.

   Works displays the Paste Special dialog box from which you can choose Paste options.
7. Choose the Paste Link button.

   Works inserts the information into your document at the insertion point.

Embedding an object in a document

When you add an object as an embedded object, it remains joined to the application that you created in it. Because of this join, you can change the object without leaving your document.

Embedded objects can include images from Microsoft Draw and objects from any other Windows version 3.0 or later application that is capable of creating them. Check your application's documentation for more information.

In order for embedded objects to be able to start the application that they were created in, you must have that application installed on your hard disk. The Works Setup program installed Microsoft Draw for Windows at the same time you installed Works.

To add a drawing from Microsoft Draw

Saving your work in Microsoft Draw
As you work on your drawings, it is a good idea to save them periodically. To do so, choose the Update command from the Microsoft Draw File menu. When you do, Works saves the drawing in your Word Processor document. The drawing is then saved on disk when you save the Word Processor document.

1. Move the insertion point to where you want to add the drawing.
2. From the Insert menu, choose Drawing.

   Works starts Microsoft Draw.
3. Create the drawing you want to add, or open an existing drawing.

   For instructions on using Microsoft Draw, press F1 at any time while you are working in Microsoft Draw. Microsoft Draw displays an index from which you can choose a topic.
4. From the File menu in Microsoft Draw, choose Exit And Return.

   When Works asks if you want to update your Word Processor document, choose the Yes button.

   Microsoft Draw quits and Works inserts the drawing you created into your Word Processor document.

To change a drawing

1. Double-click the drawing.

   –or–

   Select the drawing, and then choose the Edit Microsoft Draw Object command from the Edit menu.
2. Microsoft Draw starts and displays the drawing.
3. Make whatever changes you want.
4. From the File menu in Microsoft Draw, choose Exit And Return.

   When Works asks if you want to update your Word Processor document, choose the Yes button.

   Microsoft Draw quits, returns you to your Word Processor document, and updates the drawing.

Changing an object's size

After adding an object to a document, you can change its height, its width, or both using the Picture command from the Format menu.

To change the size of a chart or other object

Object size
When you insert an object, it retains its size unless it is higher or wider than the page margins. If it is too big, Works scales it to fit within the margins. If the object is smaller than one page, but there is not room for it on the page, Works places it at the top of the next page.

1. In the Word Processor document, select the chart or object
2. From the Format menu, choose Picture.
3. Type new measurements (percentages of the original size) in either the Height or Width box, or both.

   Example: Type **50** in both the Height and Width boxes to reduce the object size by half (50 percent).
4. Choose the OK button.

Deleting text, charts, drawings, and other objects

For a tutorial, press SHIFT+F1 and go to the "Moving and copying text" lesson in the Word Processor and Draw section of the tutorial.

When you want to delete text, charts, drawings, or other objects, you can either delete this information and store it on the Windows Clipboard, or you can delete it without storing it. Information that is not stored on the Clipboard is not available for reinsertion.

However, you can reinsert information stored on the Clipboard anywhere in a document, or in other documents.

To delete the character to the right of the insertion point

- Press DEL.

  Works does not store the deleted character on the Clipboard.

What is the Clipboard?
The Windows Clipboard is a temporary storage space where Works stores text or objects you cut or copy. The Clipboard retains the text or object until you cut or copy other text or another object.

To delete the character to the left of the insertion point

- Press BACKSPACE.

  Works does not store the deleted character on the Clipboard.

To delete a block of text or objects and store it on the Clipboard

1. Highlight the text or objects you want to delete.
2. From the Edit menu, choose Cut.
   –or–
   Press SHIFT+DEL.

   Works stores the deleted text or objects on the Clipboard.

Deleting words, lines, or paragraphs
You can delete any amount of text, including charts, drawings, and other objects, at one time. For information about highlighting information you want to delete, see "Highlighting to make changes" on page 10.

To undo a deletion

- Immediately after deleting the information, choose Undo from the Edit menu.
  –or–
  Press ALT+BACKSPACE.

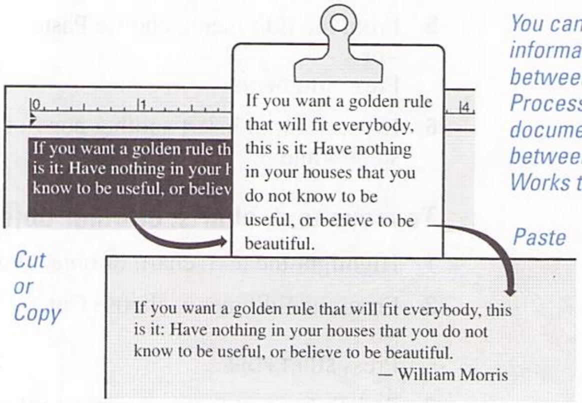
To insert text, charts, or other objects stored on the Clipboard into another location

1. Move the insertion point to where you want to reinsert the text or objects.
2. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.

Copying and moving text, charts, objects, formats, and styles

For a tutorial, press SHIFT+F1 and go to the "Moving and copying text" lesson in the Word Processor and Draw section of the tutorial.

When you copy or move text within a document or to another document, the text retains its font size, font style (bold, italic, underline), and position (subscript and superscript). If the copied or moved text or object includes a paragraph mark, it also retains its paragraph formatting, such as indents, borders, and tab stops.


0
1
4
If you want a golden rule th
is it: Have nothing in your h
know to be useful, or believ
If you want a golden rule that will fit everybody, this is it: Have nothing in your houses that you do not know to be useful, or believe to be beautiful.
Cut or Copy
Paste

If you want a golden rule that will fit everybody, this is it: Have nothing in your houses that you do not know to be useful, or believe to be beautiful.
— William Morris

You can copy information between Word Processor documents or between other Works tools.

Besides copying text and objects, you can also copy styles and formats from a character or a paragraph to another character or paragraph. You can also copy or move information from the Word Processor to another Windows application.

Important If Typing Replaces Selection from the Options menu is on, and you highlight any text before copying or moving text or objects into a document, Works replaces the highlighted text with the new text. If you replace text or an object by mistake, immediately choose Undo from the Edit menu to restore the original text or objects.

To copy text, charts, and other objects

For information about inserting linked and embedded objects into a document, see "Adding charts, drawings, and other objects" on page 31.

1. Highlight the text, chart, or object you want to copy.
2. From the Edit menu, choose Copy.
   –or–
   Press CTRL+INS.
3. If you are copying to another Works document, switch to or open the document.
4. Move the insertion point to where you want to insert the copy.
5. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.
6. If you want to insert another copy of the same text or object, repeat steps 4 and 5.

To move text, charts, or other objects

1. Highlight the text, chart, or object you want to move.
2. From the Edit menu, choose Cut.
   –or–
   Press SHIFT+DEL.
3. Switch to or open the document into which you want to insert the text or object.
4. Move the insertion point to where you want to insert the text or object.
5. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.
6. If you want to insert the same text or object in another place, repeat steps 4 and 5.

To copy character styles or paragraph formats

1. Highlight the text or paragraph you want to copy the style or format from.
2. From the Edit menu, choose Copy.
3. Highlight the character or paragraph you want to copy to.

   If you want to copy to more than one character or paragraph, highlight them all.
4. From the Edit menu, choose Paste Special.
5. In the Paste Special dialog box, choose either the Character Style or Paragraph Format option button.
6. Choose the OK button.

   When Works copies the style or format, it replaces any existing styles and formats.
7. Repeat steps 3 through 6 to copy the same style or format to other characters or paragraphs.

Copying to other applications

You can copy text, charts, or other objects to other Windows version 3.0 or later applications. For example, you can copy messages from the Word Processor into Windows Terminal to send to another computer user.

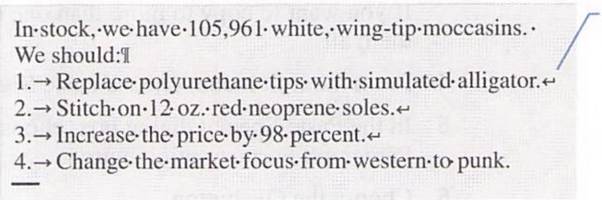
To copy from the Word Processor to another Windows application

1. Highlight the text you want to copy.

   If you are copying a chart, a picture, or other object, be sure the application you are copying to can accept that type of object. For more information, see "Adding charts, drawings, and other objects" on page 31.
2. From the Edit menu, choose Copy.
3. Open or switch to the application you want to copy to.
4. From that application, choose the Paste command. Paste is usually found on the Edit menu.

Viewing and inserting special characters

Special characters help control how a document looks and prints—they can make a line shorter (using an end-of-line mark), print the date or time, or keep certain words from being hyphenated. Initially, Works hides special characters, but you can display them at any time.



In·stock,·we·have·105,961·white,·wing-tip·moccasins.·
We should:¶
1.→Replace·polyurethane·tips·with·simulated·alligator.↵
2.→Stitch·on·12·oz.·red·neoprene·soles.↵
3.→Increase·the·price·by·98·percent.↵
4.→Change·the·market·focus·from·western·to·punk.
—

The Show All Characters command (Options menu) lets you show or hide special characters, such as the end-of-line mark.

You can type certain special characters from the keyboard. Others you insert using the Special Character command from the Insert menu.

To display or hide special characters

▶ From the Options menu, choose Show All Characters.

When Show All Characters is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show All Characters, choose the command again.

To insert certain special characters by typing

▶ Press the appropriate key as described in the following table:

Press	To insert a
ENTER	Paragraph mark(¶).
TAB	Tab mark (→).
SPACEBAR	Space mark (·).
SHIFT+ENTER	End-of-line mark (↵).

The end-of-file mark
The Word Processor always displays the end-of-file mark (—) as the last character in every document. You cannot move the insertion point below this mark and you cannot delete the mark.

To insert any special character

1. Move the insertion point to where you want the special character.
2. From the Insert menu, choose Special Character.
3. Choose the special character option you want.

   For an explanation of the special character options, see the table following step 4.
4. Choose the OK button.

Character	**Name**	**What it does**
↵	End-of-line mark	Creates a new line but not a paragraph; use in tables or multiple-line headers and footers
-	Optional hyphen	Hyphenates a word if it occurs at the end of a line
-	Nonbreaking hyphen	Keeps two words that must be joined by a hyphen from breaking across lines
	Nonbreaking space	Keeps words that must stay together from being separated when they occur at the end of a line
page	Print page number	Prints the page number at the location of the special character
filename	Print filename	Prints the filename at the location of the special character
date	Print date	Prints the date at the location of the special character
longdate	Print long date	Prints the date in the long format (such as September 12, 1991) at the location of the special character
time	Print time	Prints the time at the location of the special character
10/12/91	Current date	Inserts today's date
11:12 AM	Current time	Inserts the current time

These are placeholders
When you print your document or choose Print Preview, the placeholders for these special characters are replaced with the characters themselves.

Finding and replacing text and special characters

For a tutorial, press SHIFT+F1 and go to the "Finding and changing text" lesson in the Word Processor and Draw section of the tutorial.

Finding and replacing extended characters
You can type extended characters in a document, and you can search for and replace them. To type an extended character, first be sure Num Lock is turned on, then press and hold the ALT key while typing the character's code on the numeric keypad. For example, to type the pound currency symbol (£), press ALT and type **0163**

Works can search for text and then replace what it finds with other characters or words.

For example, if you made a mistake typing a company's name throughout a letter, you could replace each incorrect spelling with the correct spelling.

Works can also find and replace special characters, or combinations of special characters and text. For example, you can:

- Replace several consecutive spaces with one tab mark.
- Replace one or more tab marks with several consecutive spaces.
- Delete extra paragraph marks.
- Insert nonbreaking hyphens or spaces between certain words.

You have the following options when finding or replacing characters:

- Search only part of a document

  If you highlight a block of text before searching or replacing, Works only searches within the highlighted text.

- Find either whole words or partial words

  For example, Works can find the word "cash" or it can find any word with "cash" in it—such as "cashier."

- Match capitalization

  For example, if you replace "if" with "when," Works replaces "If" at the beginning of a sentence with "When." Works can also find only those instances that exactly match the capitalization you type.

- Search for special characters

  For example, Works can find a word when it appears at the beginning of a paragraph (following a paragraph mark), or it can find a paragraph mark alone.

- Search for and replace extended characters

  Extended characters are characters that do not appear on the keyboard, such as ½, ü, ¿, Ä, ¥, and ß. For more information about extended characters, see Appendix B: Extended characters on page 395.

- Use a question mark (?) wildcard to find similar words

Each wildcard represents a single character in the same position. For example:

To find and replace	Type
Both Anderson and Andersen	**anders?n**
Any five-letter word beginning with "r" and ending with "t"	**r???t**
June and July	**ju??**

To find text and special characters

For information on showing or hiding special characters, see the "Viewing and inserting special characters" on page 40.

1 Move the insertion point to where you want to begin finding text or special characters.

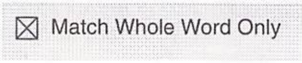
2 From the Select menu, choose Find.

3 In the Find What box, type the characters you want to search for.

To search for a special character, type the code for the character. For a list of special character codes, see the table following step 5.

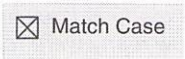
For example: To find every time the word "However" begins a paragraph, type **^pHowever**

4 Choose any options you want: Match Whole Word Only, Match Case, or both.



☒ Match Whole Word Only

Works finds only whole words—if you type "cash" it finds "cash" but not "cashier".



☒ Match Case

Works exactly matches the case of the characters you type—if you type "cash" it won't find "Cash" or "CASH".

5 Choose the OK button.

Beginning from the insertion point, Works finds the first occurrence of the text or special character you typed.

White space

White space is any number and combination of consecutive spaces, tab marks, or nonbreaking spaces.

To find	Type	To find	Type
Tab mark	^t	Paragraph mark	^p
End-of-line mark	^n	Page break	^d
Nonbreaking space	^s	Caret (^)	^^
Question mark	^?	Any character	?
White space	^w		

To repeat the previous search

▶ Press F7.

To find and replace text or special characters

1 Move the insertion point to where you want to begin finding and replacing text or special characters.

2 From the Select menu, choose Replace.

3 In the Find What box, type the characters you want to find.

If you want to search for special characters, type the appropriate code from the table following step 7.

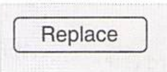
4 In the Replace With box, type the characters you want Works to replace the found text with.

If you want to replace the found text with special characters, type the appropriate code. For a list of special character codes, see the table following step 7.

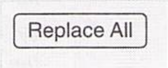
5 Choose any options you want: Match Whole Word Only, Match Case, or both.

Canceling a replacement
After choosing the Replace All button, you can stop the action by pressing ESC. However, the changes already made will remain. To change the affect of a replace command, immediately choose Undo from the Edit menu.

6 Choose either the Replace button or the Replace All button.



When an occurrence of the text is found, Works asks if you want to replace it.



Works replaces all instances of the found text and reports how many were replaced.

7 When finished, choose the Cancel button.

Typing a caret
To type a caret (^), press SHIFT+6.

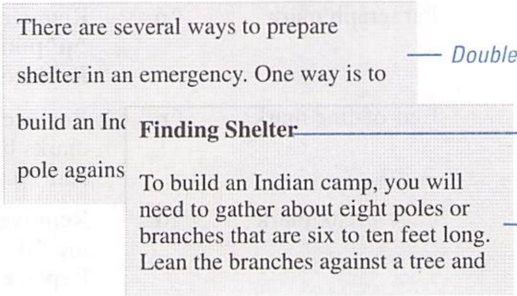
White space
White space is any number and combination of consecutive spaces, tab marks, or nonbreaking spaces.

To find or replace	Type	Examples
Tab mark	^t	Replace spaces with tab marks by typing spaces in the Find What box and **^t** in the Replace With box.
Paragraph mark	^p	Remove double paragraph marks by typing **^p^p** in the Find What box and **^p** in the Replace With box.
End-of-line mark	^n	Replace end-of-line marks with paragraph marks by typing **^n** in the Find What box and **^p** in the Replace With box.
Page-break mark	^d	Remove manual page-break marks by typing **^d** in the Find What box and leave the Replace With box empty.
Nonbreaking space	^s	Place nonbreaking spaces between two words by typing the words with a space between them in the Find What box and with a nonbreaking space character (^s) between them in the Replace With box.
Caret (^)	^^	Search for or replace carets by typing two carets in the Find What or Replace With box.
Question mark	^?	Search for or replace a question mark by typing a caret before the question mark (^?).
White space	^w	Replace all white spaces with a tab by typing **^w** in the Find What box and **^t** in the Replace With box.
Any character	?	Replace the word "Jun" followed by any three characters with the word "June" by typing **Jun???** in the Find What box and **June** in the Replace With box.

Setting line and paragraph spacing

For a tutorial, press SHIFT+F1 and go to the "Formatting paragraphs" lesson in the Word Processor and Draw section of the tutorial.

Changing the line and paragraph spacing in a document can help make it easier to read and edit.



There are several ways to prepare

shelter in an emergency. One way is to

build an Inc

pole agains

Finding Shelter

To build an Indian camp, you will need to gather about eight poles or branches that are six to ten feet long. Lean the branches against a tree and

Double-spaced text

You can add precise space above heads, below heads, or both.

Single-spaced text

Works sets line spacing according to the height of the largest character in the line. If you set a line space of 2, Works doubles the space between lines. You can set spacing using either whole numbers (2, 3, 4, and so on) or fractions (1.5, 1.75, 2.25, and so on).

If you change line or paragraph spacing before typing a paragraph, all subsequent lines or paragraphs that you type will have the new spacing until you change it.

To quickly set single- or double-spaced lines

1 Move the insertion point to the paragraph you want to change.

2 Click the Single- or Double-space button on the Toolbar.

Single-space button *Double-space button*

–or–

Press the single- or double-space shortcut keys.

To	Press
Set single-spaced lines	CTRL+1
Set double-spaced lines	CTRL+2

To set precise line spacing

Changing measurement units
You can specify other measurement units besides lines when typing line spacing values. For example, you could type 0.5in for inches, 1.26cm for centimeters, 3pi for picas, or 37pt for points.

1. Highlight each paragraph you want to change.
2. From the Format menu, choose Indents & Spacing.
3. In the Space Between Lines box, type the spacing you want.

   The line spacing you type does not need to be in whole numbers. For example, you could type 0.75, 1.33, and so on.
4. Choose the OK button.

To add space before or after a paragraph

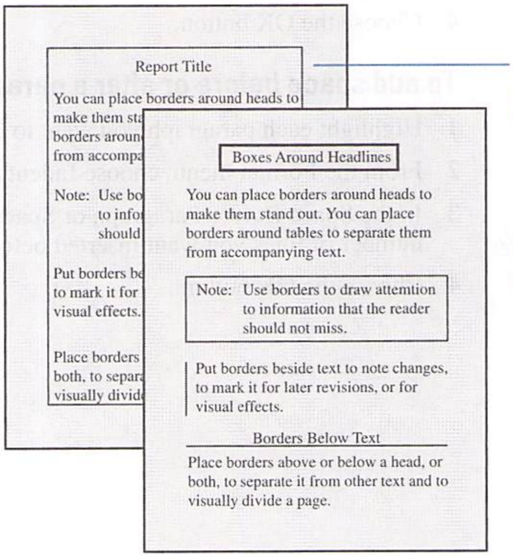
Adding space after paragraphs usually works best
When you want extra space between paragraphs, it usually works best to add the space after the paragraph. That way, Works will not place the extra spacing at the top of a page.

1. Highlight each paragraph you want to change.
2. From the Format menu, choose Indents & Spacing.
3. In the Space Before Paragraph or Space After Paragraph box, type the number of lines you want inserted before or after the paragraph.
4. Choose the OK button.

Placing borders around a paragraph

For a tutorial, press SHIFT+F1 and go to the "Formatting paragraphs" lesson in the Word Processor and Draw section of the tutorial.

Borders are single, double, or bold lines around one or more paragraphs, which help set them apart from other text. Borders extend from the left margin or indent to the right margin or indent. Use borders to draw attention to important points, to separate sections of a document, to underline headings, and so on.



Report Title

You can place borders around heads to make them st borders aroun from accompa

Note: Use bo to info should

Put borders be to mark it for visual effects.

Place borders both, to separa visually divid

Boxes Around Headlines

You can place borders around heads to make them stand out. You can place borders around tables to separate them from accompanying text.

Note: Use borders to draw attemtion to information that the reader should not miss.

Put borders beside text to note changes, to mark it for later revisions, or for visual effects.

Borders Below Text

Place borders above or below a head, or both, to separate it from other text and to visually divide a page.

You can place a border around any number of paragraphs, including an entire page.

You can put borders around, to the left or right, under or above paragraphs.

To add a border

1 Highlight each paragraph you want to add a border to.

If you want to place a border around the contents of an entire page, highlight all the paragraphs on that page.

2 From the Format menu, choose Border.

3 Under Border, choose the options you want: Outline, Top, Bottom, Left, or Right.

4 Under Line Style, choose an option button: Normal, Bold, or Double.

5 Choose the OK button.

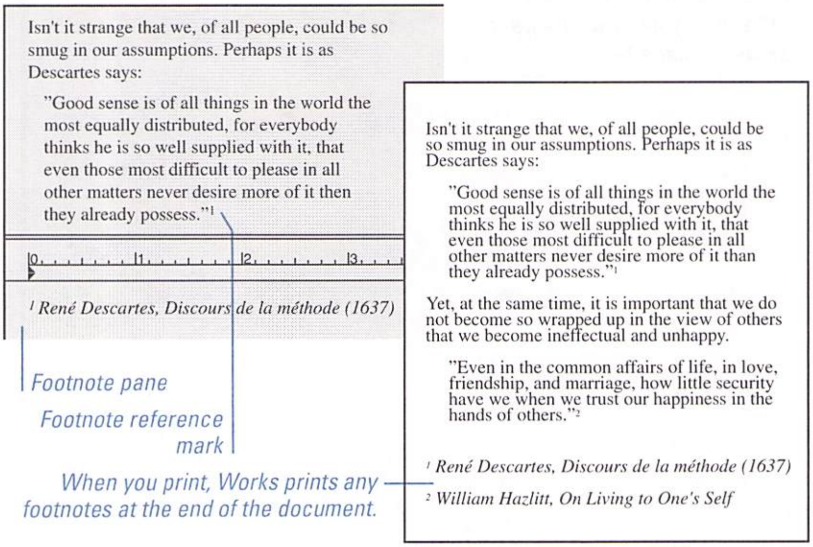
To remove a border

1 Highlight each paragraph you want to remove borders from.
2 From the Format menu, choose Border.
3 Under Border, clear the check box for each border you want to remove.
4 Choose the OK button.

Borders for short lines
If you want to add a border to a short line of text, such as a title, without having the border extend all the way to the right margin, increase the paragraph's right indents. For more information, see "Setting your own paragraph indents" on page 19.

Creating and editing a footnote

Footnotes are commonly used for documenting quotations, paraphrases, and summaries, or making comments that you do not want in the body of your document. When you create a footnote, Works places a footnote reference mark in your document and opens a footnote pane where you can type the footnote text.



Isn't it strange that we, of all people, could be so smug in our assumptions. Perhaps it is as Descartes says:

> "Good sense is of all things in the world the most equally distributed, for everybody thinks he is so well supplied with it, that even those most difficult to please in all other matters never desire more of it then they already possess."[1]

[1] René Descartes, Discours de la méthode (1637)

Footnote pane

Footnote reference mark

When you print, Works prints any footnotes at the end of the document.

Isn't it strange that we, of all people, could be so smug in our assumptions. Perhaps it is as Descartes says:

> "Good sense is of all things in the world the most equally distributed, for everybody thinks he is so well supplied with it, that even those most difficult to please in all other matters never desire more of it than they already possess."[1]

Yet, at the same time, it is important that we do not become so wrapped up in the view of others that we become ineffectual and unhappy.

> "Even in the common affairs of life, in love, friendship, and marriage, how little security have we when we trust our happiness in the hands of others."[2]

[1] René Descartes, Discours de la méthode (1637)

[2] William Hazlitt, On Living to One's Self

After creating a footnote, you can:

- Edit it the same way you edit other text.
- Delete, move, or copy a footnote reference mark.

  When you do, Works automatically moves, deletes, or copies the associated footnote and renumbers any remaining footnotes.
- Change the footnote or the footnote reference mark's font, font size, or font style (bold, italic, underline).

To create a footnote

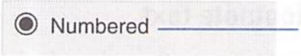
Numbered footnote marks

When you choose a numbered reference mark, Works automatically assigns the next sequential number to that footnote.

Using nonkeyboard characters for reference marks

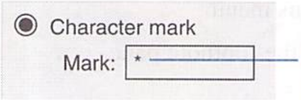
*You can insert nonkeyboard characters for reference marks by holding down the ALT key and typing the extended character code for the character you want. For example, to type the § character, press and hold down ALT and then type **0167** on your computer's numeric keypad. For more information, see Appendix B: Extended Characters on page 395.*

1. Move the insertion point to where you want to insert the footnote reference mark.
2. From the Insert menu, choose Footnote.
3. Choose either the Numbered or Character Mark option button. If you choose Character Mark, type the character you want to use as the reference mark in the Mark box.



● Numbered

Works creates sequentially numbered footnotes.



● Character mark

Mark: *

Works attaches the character you specify to the highlighted footnote.

4. Choose the OK button.
5. Type the footnote text in the footnote pane.
6. If you want, change the footnote's alignment, indents, font, font size, or font style.
7. Press F6 to return the insertion point to the document window.

To quickly close a footnote pane

▶ To close the footnote pane with the mouse, double-click the split bar.

To quickly resize the footnote pane

▶ Drag the split bar to the new location.

If you drag the split bar all the way to the top or bottom of the document window, Works closes the footnote pane.

To open or close the footnote pane

▶ From the Options menu, choose Show Footnotes.

When Show Footnotes is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Footnotes, choose the command again.

To resize the footnote pane

1 From the Window menu, choose Split.

2 Use the UP ARROW or DOWN ARROW key to move the Split bar.

3 When you have positioned the split bar where you want it, press ENTER.

If you move the split bar all the way to the top or bottom of the document window before pressing ENTER, Works closes the footnote pane.

To edit footnote text

1 If the footnote pane is closed, choose Show Footnotes from the Options menu.

2 Click the footnote pane.
–or–
Press F6 to move the insertion point to the footnote pane.

3 Edit the footnote text as you would regular text.

4 When you are through editing, click the document pane.
–or–
Press F6 to return the insertion point to the document.

To delete a footnote reference mark

Viewing footnote marks
Footnote reference marks are always displayed in your document, but you can hide footnote text by closing the footnote pane.

1 In the document window, highlight the footnote reference mark you want to delete.

2 Press DEL.

To move a footnote reference mark

1 In the document window, highlight the footnote reference mark you want to move.

2 From the Edit menu, choose Cut.
–or–
Press SHIFT+DEL.

3 Move the insertion point to where you want to move the reference mark.

4 From the Edit menu, choose Paste.
–or–
Press SHIFT+INS.

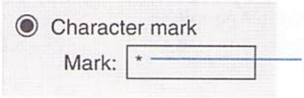
To copy a footnote

1. In the document window, highlight the footnote reference mark you want to copy.
2. From the Edit menu, choose Copy.
   –or–
   Press CTRL+INS.
3. Move the insertion point to where you want to place a copy of the reference mark.
4. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.

To change a footnote reference mark

1. In the document window or the footnote pane, highlight the footnote reference mark you want to change.
2. From the Insert menu, choose Footnote.
3. Choose the Character Mark option button.
4. In the Mark box, type the reference mark you want.

   For example: type *



● Character mark

Mark: *

Works attaches the character you specify to the highlighted footnote.

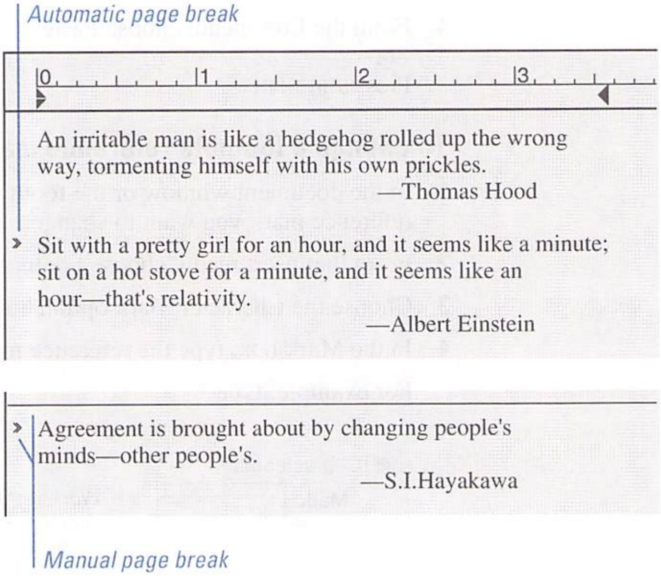
5. Choose the OK button.

   In the document window, the previous reference mark is replaced with the new mark.

Setting a page break

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Word Processor and Draw section of the tutorial.

Works automatically creates page breaks in a document that determine the beginning of each page when you print. You can also insert your own page breaks if you want pages to start at different locations. When you set a manual page break, Works removes or adjusts any automatic page breaks. Works marks automatic page breaks and manual page breaks differently.



Automatic page break

An irritable man is like a hedgehog rolled up the wrong way, tormenting himself with his own prickles.
—Thomas Hood

Sit with a pretty girl for an hour, and it seems like a minute; sit on a hot stove for a minute, and it seems like an hour—that's relativity.
—Albert Einstein

Agreement is brought about by changing people's minds—other people's.
—S.I.Hayakawa

Manual page break

Forcing pagination
If you have a long document, automatic pagination may lag behind by a few pages. You can update page breaks using the Paginate Now command from the Options menu.

You can format paragraphs so that page breaks will not split them or separate them from following paragraphs. Such formatting prevents tables from splitting across pages and headings from being separated from following text.

To insert a page break

1 Move the insertion point to the beginning of the line where you want a new page to begin.

2 From the Insert menu, choose Page Break.
–or–
Press CTRL+ENTER.

To remove a page break

1. Move the insertion point to the beginning of the line that immediately follows the page break.
2. Press BACKSPACE.

To keep paragraphs on the same page

1. Highlight each paragraph you don't want to break across two pages.
2. From the Format menu, choose Indents & Spacing.
3. To keep Works from inserting a page break in the selection, choose the Don't Break Paragraph check box.
   –or–
   To keep Works from inserting a page break between the selection and the next paragraph, choose the Keep Paragraph With Next check box.
4. Choose the OK button.

To repaginate a document

▶ From the Options menu, choose Paginate Now.

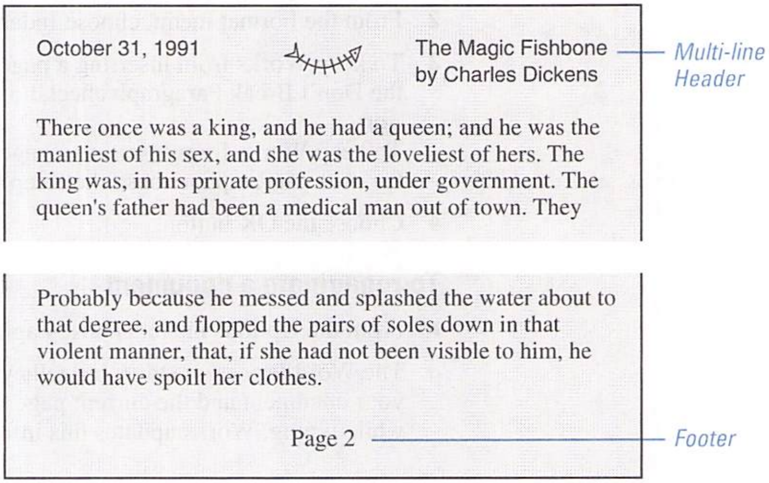
The Word Processor status bar tells you the total number of pages in your document and the current page number. Whenever you pause while typing, Works updates this information.

Creating a header or footer and numbering pages

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Word Processor and Draw section of the tutorial.

A header is text that prints at the top of every printed page in a document. A footer is text that prints at the bottom of every printed page. Use headers and footers to number pages, add chapter titles, dates, or any other information to your pages.

Where headers and footers print
By changing page margins and header or footer margins, you can control where a header or footer prints. For example, increase the top page margin and the header margin to cause the header to print lower on the page.



October 31, 1991

The Magic Fishbone
by Charles Dickens

There once was a king, and he had a queen; and he was the manliest of his sex, and she was the loveliest of hers. The king was, in his private profession, under government. The queen's father had been a medical man out of town. They

Probably because he messed and splashed the water about to that degree, and flopped the pairs of soles down in that violent manner, that, if she had not been visible to him, he would have spoilt her clothes.

Page 2

Works has two types of headers and footers:

- Paragraph headers and footers can have one or more lines and can include a drawing or other object.

  When you create header and footer paragraphs, Works inserts a footer paragraph with the text "Page—," a page-number placeholder (*page*), and a blank header paragraph. You can copy, move or format the text as you would any text. For example, you can move the page-number placeholder from the footer paragraph and paste it into the header paragraph.

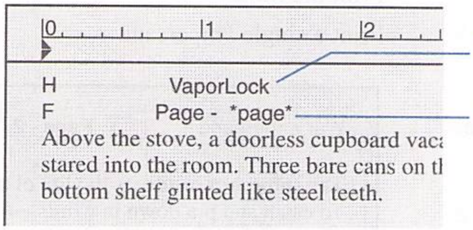
- Standard headers and footers have only one line of text. You type the text into the Header & Footer dialog box. In a standard header and footer, you can insert special codes that tell Works to insert page numbers, dates, and times and how to align the header or footer (left, right, or center).

__Check if headers and footers fit__
When creating multiple-line (paragraph) headers and footers, you might need to increase the top or bottom page margins. Click the Print Preview button on the Toolbar to see if headers and footers fit on the page before you print the document.

To create a header or footer paragraph

1. From the Edit menu, choose Headers & Footers.
2. Choose the Use Header And Footer Paragraphs check box.
3. Choose the OK button.

   Works inserts a header and footer paragraph at the beginning of the document. It places a page-number placeholder in the footer paragraph. If you do not want a footer, delete the page-number placeholder. If you do not want a header, do not type any text in the header line.



H VaporLock
F Page - *page*
Above the stove, a doorless cupboard vac
stared into the room. Three bare cans on t
bottom shelf glinted like steel teeth.

Header paragraph

Footer paragraph

4. Move the insertion point to the header (H) or footer (F) paragraph mark, and type the header or footer text. If you want to start a new line while typing, press SHIFT+ENTER.

   The paragraphs have preset tab stops to center, left-, or right-align text. Press TAB to center text or press TAB twice to right-align text before typing it.
5. When you finish, move the insertion point into the document.

__Alignment__
Works automatically centers standard headers and footers unless you change the alignment.

To create a standard header or footer

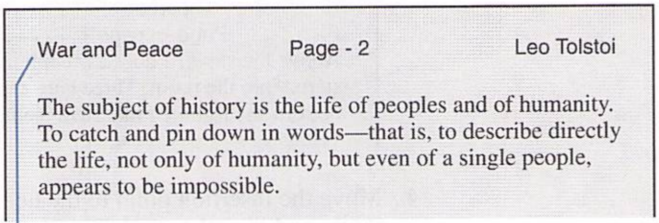
1. From the Edit menu, choose Headers & Footers.
2. If the Use Header And Footer Paragraphs check box is chosen, clear it so that Works can insert a standard header or footer.
3. In the Header box, the Footer box, or both, type the text you want. Also type any header and footer codes you want.

   For a list of header and footer codes, see the table following step 4.
4. Choose the OK button.

Date and time formats
Unless you change the Windows country settings, Works prints dates in the format 03/15/91 and times in the format 03:45 PM. Use the Windows Control Panel to change the country setting. For more information, see your Windows documentation.

To	Type
Left align characters that follow	**&l**
Right align characters that follow	**&r**
Center the characters that follow	**&c**
Print the page number	**&p**
Print the filename	**&f**
Print the date	**&d**
Print the date in long format	**&n**
Print the time	**&t**
Print a single ampersand	**&&**

Using borders with headers and footers
You can place borders around a header and footer paragraph including a single line above or below. For more information, see "Placing borders around a paragraph" on page 48.



War and Peace Page - 2 Leo Tolstoi

The subject of history is the life of peoples and of humanity. To catch and pin down in words—that is, to describe directly the life, not only of humanity, but even of a single people, appears to be impossible.

You can include as many codes as you want in a header or footer. Typing **&lWar and Peace &c Page - &p&rLeo Tolstoi** *in a standard header creates this header.*

To insert page numbers in a standard footer

1 From the Edit menu, choose Headers & Footers.

2 If the Use Header And Footer Paragraphs check box is on, clear it.

3 In the Footer box, type **&p**

4 Choose the OK button.

To change the starting page number

Setting the first page number
Choosing the number for the first page of a document is useful if you want to print several documents and combine them later into one document with consecutive page numbers.

1 From the File menu, choose Page Setup & Margins.

2 In the 1st Page Number box, type the starting page number.

3 Choose the OK button.

To change header and footer margins

1 From the File menu, choose Page Setup & Margins.

2 Type new measurements for the header margin and footer margin.

3 Choose the OK button.

To print without a header or footer on the first page

1. From the Edit menu, choose Headers & Footers.
2. To prevent Works from printing a header on the first page, choose the No Header On 1st Page check box.
3. To prevent Works from printing a footer on the first page, choose the No Footer On 1st Page check box.
4. Choose the OK button.

To turn off all header or footer paragraphs

1. From the Edit menu, choose Headers & Footers.
2. If the Use Header And Footer Paragraphs check box is chosen, clear it.
3. .Choose the OK button.

   To turn header and footer paragraphs back on, choose the Use Headers And Footers Paragraphs check box again.

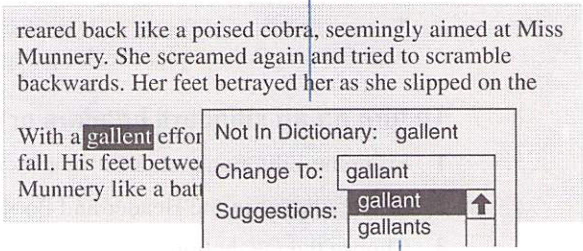
To turn off all standard headers or footers

1. From the Edit menu, choose Headers & Footers.
2. Delete all text in the Header and Footer boxes.
3. Choose the OK button.

Checking spelling and using the Thesaurus

For a tutorial, press SHIFT+F1 and go to the "Finding and changing text" lesson in the Word Processor and Draw section of the tutorial.

The Works spelling checker uses a 120,000-word dictionary when scanning a document for words that are spelled, capitalized, or hyphenated incorrectly. If Works finds a word it does not recognize but is spelled correctly, you can add it to the dictionary and Works won't question it in subsequent spelling checks. The spelling checker also looks for repeated words, such as "the the."



reared back like a poised cobra, seemingly aimed at Miss
Munnery. She screamed again and tried to scramble
backwards. Her feet betrayed her as she slipped on the

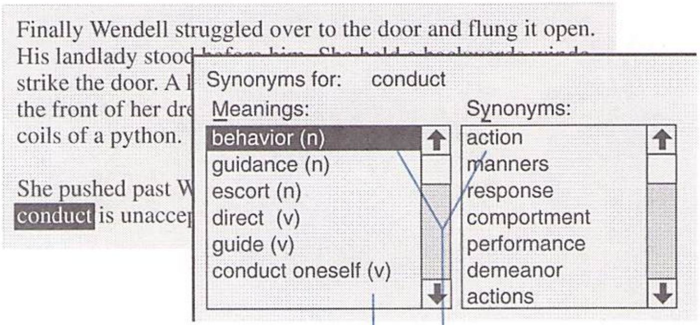
With a gallent effor
fall. His feet betwe
Munnery like a batt

Not In Dictionary: gallent
Change To: gallant
Suggestions: gallant
gallants

When Works finds a word not in the dictionaries, it indicates the kind of problem.

You can ask Works for spelling suggestions.

The 190,000-word Works Thesaurus provides synonyms—words with the same or similar meanings—to help you find the right word and avoid repetition.



Finally Wendell struggled over to the door and flung it open.
His landlady stood
strike the door. A
the front of her dr
coils of a python.

She pushed past W
conduct is unacce

Synonyms for: conduct

Meanings:	Synonyms:
behavior (n)	action
guidance (n)	manners
escort (n)	response
direct (v)	comportment
guide (v)	performance
conduct oneself (v)	demeanor
	actions

Works displays a list of "meanings" and indicates their part of speech, such as noun (n) or verb (v).

When you choose a word in the Meanings list, Works displays a list of synonyms.

Works can also count the number of words in a document, including words in headers and footers and in footnotes.

To check spelling and add words to a personal dictionary

1 Move the insertion point to where you want to begin the spelling check.

2 On the Toolbar, click the Check Spelling button.

Spelling button

Works begins checking your document. When it finds a word that is not in the dictionary, it displays the word.

3 In the Spelling dialog box, choose the appropriate button to change or ignore the word.

Ignore	*Ignores only the highlighted word*	Ignore All	*Ignores all instanc of the same word*
Change	*Changes only the highlighted word*	Change All	*Changes all instan of the same word*
Add	*Adds the highlighted word to the custom dictionary*	Suggest	*Displays a list of proposed spelling:*

Other options
Choose the Skip Capitalized Words check box if you do not want to check proper names, acronyms, or other capitalized words. If you always want Works to suggest a change, choose Always Suggest.

4 To end the spelling check, choose the Close button.

5 When Works finishes the spelling check, choose the OK button.

To find a synonym

1 Highlight the word you want to find a synonym for.

2 On the Toolbar, click the Thesaurus button.

Thesaurus button

3 If Works displays more than one word in the Meanings box, choose the word for which you want to see a list of synonyms.

4 To change the word in your document, choose the synonym you want, and then choose the Change button.
–or–
To exit the Thesaurus without making changes, choose the Cancel button.

Extending a synonym search
When using the Thesaurus, you can search for synonyms for any of the words that Works displays in the Synonyms box. To do so, choose the synonym you want and then choose the Suggest button.

To count the number of words in a selection or an entire document

1. Highlight the selection you want to count.

   If you want to count the entire document, do not highlight any text.
2. From the Options menu, choose Word Count.

   Works scans your selection or document and counts the words.

   When Works is finished counting, it displays the number of words in a message box.
3. Choose the OK button.

Marking your place with bookmarks

Bookmarks help you quickly find places in a document—the beginning of an important section, where you want to insert text or graphics, or a paragraph where you want to make changes later.

When you create a bookmark, Works inserts a hidden marker at the insertion point. After creating a bookmark, you can jump to it by choosing its name, without having to scroll through the document.

You can also jump to a specific page anywhere in a document.

To create a bookmark for a paragraph, title, or other object

1 Move the insertion point to where you want the bookmark.

2 From the Insert menu, choose Bookmark Name.

3 In the Name box, type a name for the bookmark.

For example: In a paragraph where you are writing about your business's growth, you might type the bookmark name **Growth**

4 Choose the OK button.

To delete a bookmark

1 From the Insert menu, choose Bookmark Name.

2 In the Names box, choose the bookmark name you want to delete.

3 Choose the Delete button.

4 To delete another bookmark, repeat steps 2 and 3.

5 Choose the Close button .

To go to a bookmark or a specific page

1 Press F5.
–or–
From the Select menu, choose Go To.

2 In the Go To box, type a bookmark name or a page number.
–or–
In the Names box, choose the bookmark you want to go to.

3 Choose the OK button.

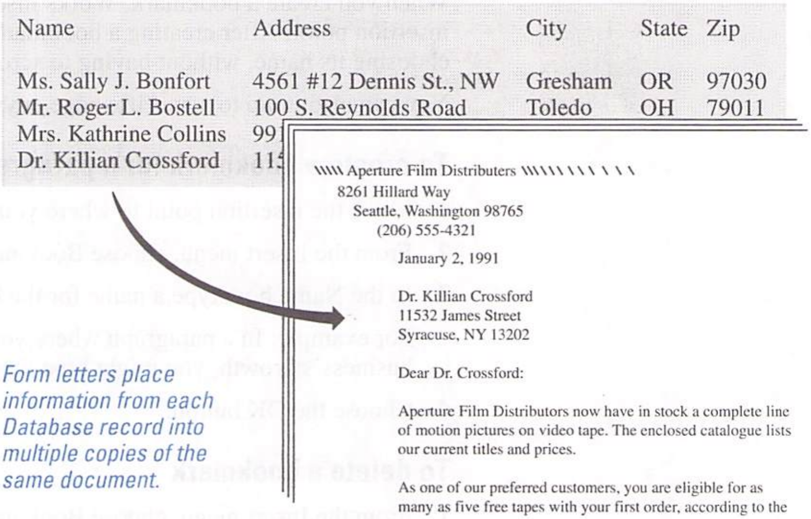
Creating form letters and other forms

For a tutorial, press SHIFT+F1 and go to the "Creating form letters" lesson in the Using tools together section of the tutorial.

Form letters print multiple copies of the same document, automatically inserting different information, such as a name and address, in each copy. Works takes the information from selected fields in a Works database.

Database terms
A field is one piece of information in a database record. A record is all the information (all the fields) specific to one person or item.

For information on creating a database, see "Guide to the Database" on page 221.



Name	Address	City	State	Zip
Ms. Sally J. Bonfort	4561 #12 Dennis St., NW	Gresham	OR	97030
Mr. Roger L. Bostell	100 S. Reynolds Road	Toledo	OH	79011
Mrs. Kathrine Collins	99			
Dr. Killian Crossford	11			

Aperture Film Distributers
8261 Hillard Way
Seattle, Washington 98765
(206) 555-4321

January 2, 1991

Dr. Killian Crossford
11532 James Street
Syracuse, NY 13202

Dear Dr. Crossford:

Aperture Film Distributors now have in stock a complete line of motion pictures on video tape. The enclosed catalogue lists our current titles and prices.

As one of our preferred customers, you are eligible for as many as five free tapes with your first order, according to the

Form letters place information from each Database record into multiple copies of the same document.

You can also create other types of forms. For example, you could create an invoice form that would use entries from a database that keeps track of customer orders or you could create a telephone log to keep track of customer calls to your company.

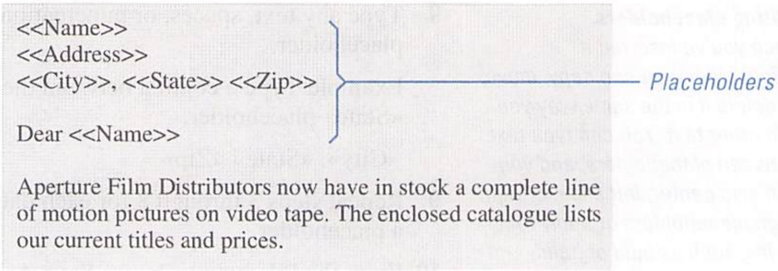
Help with form letters
If you want help creating a form letter, see the section "Team up with a WorksWizard" in the book Getting Started. *The Form Letter WorksWizard helps you create a form letter that uses the names and addresses you type into the Address Book database.*

You might create a form that adds all your inventory items that are below a certain quantity to an order form, an invoice form that prints each customer's purchases and billing information, or you might create a letter to parents, listing each of your student's accomplishments for the last semester.

Before you can print such letters and forms, you must have—or create—a database containing the information that Works will print in each copy of the form. Works will print one letter or form for each record in your database, inserting information from a different record into each copy.

You also must create a Word Processor document containing the text and graphics that will appear in each copy of the letter or form. Then you insert, into the document, one placeholder for each database field that you want Works to copy entries from.

About placeholders
A placeholder consists of a field name from a database and the chevrons that surround the field name. For example, «Name» is a placeholder for the Name field in the illustration to the right. When Works prints the letters, it replaces each placeholder with an entry from the appropriate field in the database.



<<Name>>
<<Address>>
<<City>>, <<State>> <<Zip>>

Dear <<Name>>

Aperture Film Distributors now have in stock a complete line of motion pictures on video tape. The enclosed catalogue lists our current titles and prices.

Placeholders

To put one or more spaces, periods, commas, or any other text between placeholders, type the text either before or after inserting the next placeholder.

To create your own form letter

Check before printing
Text that replaces a placeholder can be longer or shorter than its placeholder and, in some cases, might cause breaks in lines, paragraphs, or pages. Be sure to allow enough room for all the text that Works will copy into each letter from the database.

1 Create a database that contains the information you want to include in the form letter.

–or–

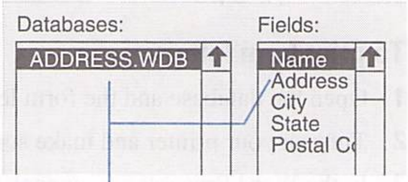
Open an existing database.

2 Create a Word Processor document containing all text that will remain the same for each letter.

3 In the Word Processor document, move the insertion point to where you want the first placeholder.

4 From the Insert menu, choose Database Field.

5 In the Databases box, choose the database you want to use.



When you highlight a database name, Works displays the fields in that database.

6 In the Fields box, choose the field that contains the entries you want Works to print at the location of the placeholder.

7 Choose the OK button.

Works inserts the placeholder into the Word Processor document.

Editing placeholders
Once you've inserted a placeholder, you can copy, move, or delete it in the same way you edit other text. You can type text between placeholders, and you can also center, left align, or right align placeholders or apply font styles, such as bold or italic.

8 Type any text, spaces, or punctuation you want before or after the placeholder.

Example:Type a comma between the «City» placeholder and the «State» placeholder.

«City», «State» «Zip»

9 Repeat steps 3 through 8 for each database field you want to insert as a placeholder.

10 From the File menu, choose Save As.

11 In the File Name box, type a name for the document.

12 Choose the OK button.

To preview form letters before printing

1 Open the database and the form letter document.

2 In the Word Processor document, from the File menu, choose Print Form Letters.

3 In the Databases box, choose the database you want to use.

4 Choose the Preview button.

Works displays the form letters in print preview. For information about viewing and scrolling in print preview, see the following section, "Previewing a document before printing."

5 To print the form letters, choose the Print button.
–or–
To exit print preview, choose the Cancel button.

To print form letters

What Works prints
Works chooses the information it prints for each form from the records currently displayed in the database. Before printing, make sure all the records that you want to print are displayed in the database. For more information on selecting and sorting records in a database, see "Organizing your records in alphabetical or numerical order" on page 270.

1 Open the database and the form letter document you want to print.

2 Turn on your printer and make sure it has paper.

3 In the Word Processor document, from the File menu, choose Print Form Letters.

4 In the Databases box, choose the database you want to use.

5 Choose the Print button.

6 In the Print dialog box, choose any print options you want.

For print option descriptions, see "Printing a document" on page 72.

7 Choose the OK button.

To cancel printing

▶ Press ESC any time to cancel printing.

Previewing a document before printing

For a tutorial, press SHIFT+F1 and go to the "Working with files" in the Starting with Works section of the tutorial.

The Works Print Preview command lets you look at the pages of your document as they will appear when you print them. By viewing the pages in this way, you can often find mistakes and make corrections before printing.

In print preview, you can look at each page three different ways:

- In the standard view, Works scales down each page, and you can see the entire page, including any headers and footers.
- In half-zoom view, Works displays the text and objects on each page approximately one-half the size that they appear in the document window.
- In full-zoom view, Works displays the text and objects on each page approximately the same size that they appear in the document window.

To preview a document

▶ On the Toolbar, click the Print Preview button.

Print Preview button

–or–
From the File menu, choose Print Preview.

Works opens the print preview window and displays the current page of the document.

Moving through a document and viewing pages in print preview

In print preview, you can view all the pages in your document, zoom (enlarge) pages in order to see more detail, and scroll zoomed pages in order to see any portion of them. The following table describes how to zoom in on and view document pages.

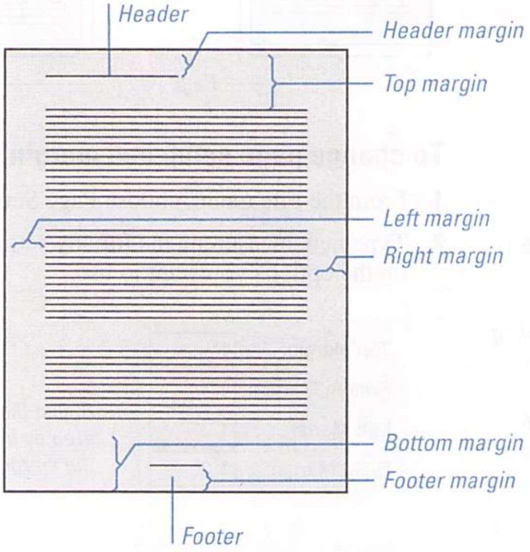
To	With the mouse	On the keyboard
Move to the next page (standard view)	Click the Next button.	Press PAGE DOWN.
Move to the previous page	Click the Previous button.	Press PAGE UP.
Zoom in to the next zoom level (half-zoom or full-zoom)	Click the Zoom In button -or- Click the page.	Press ALT+I.
Zoom in to full-zoom from standard view	Click the page.	Press ALT+I twice.
Zoom out to the previous level (half-zoom or standard view)	Click the Zoom Out button.	Press ALT+O.
Zoom out to standard view from full-zoom	Click the page.	Press ALT+O twice.
View other parts of a zoomed page	Click the scroll bars or drag the scroll box.	Press the appropriate arrow key to scroll up, down, right, or left. –or– Press PAGE UP or PAGE DOWN.
Print the document	Click the Print button.	Press ALT+T.
Return to the document window	Click the Cancel button.	Press ESC.

Changing page and margin settings

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Word Processor and Draw section of the tutorial.

Custom page and margin settings
If you regularly use page and printer options other than the Works preset options, you can create a template to set the page and margin options you want whenever you create a new document. For more information, see "Creating a template document" on page 82.

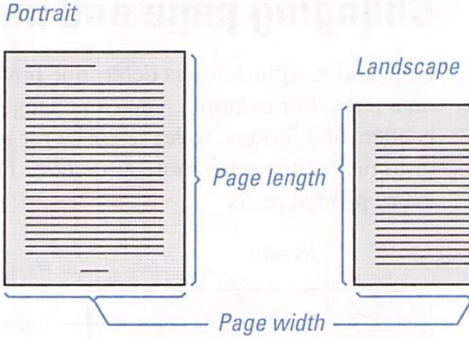
Page and margin settings determine how Works prints your information on a page. For example, you can change page margins to make room for headers and footers, to leave space for a personal or company letterhead, or to make your page more attractive. The page margins you set affect every printed page.



When you change margin settings, Works remembers the settings. You don't have to change them again for that document unless you want to change the way Works prints it.

Works is preset to print on letter-size (8.5-by-11-inch) paper. But, if you use different-sized paper you can change the page size to match. For example, you could print on legal-sized paper by typing a page length of 14 inches.

You can also choose to print a document in either portrait or landscape orientation.

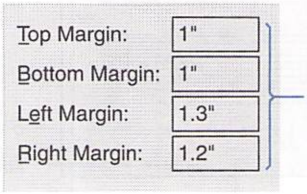


To change page setup and margin settings

1 From the File menu, choose Page Setup & Margins.

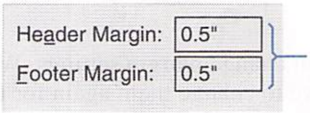
2 Type new measurements for any settings you want to change and turn on the options you want to use.

Changing measurement units
You can change the unit of measurement when typing margin or page size by including the appropriate abbreviation after the spacing value—for example: . 5in for inches, 1.26cm for centimeters, 3pi for picas, or 37pt for points.



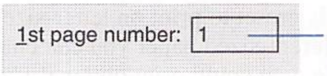
Top Margin: 1"
Bottom Margin: 1"
Left Margin: 1.3"
Right Margin: 1.2"

Adjust the size of a page's print area by increasing or decreasing the margin size.



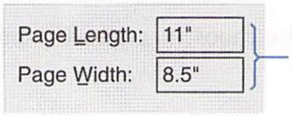
Header Margin: 0.5"
Footer Margin: 0.5"

To print properly, header and footer margins must be smaller than the top and bottom page margins.



1st page number: 1

Specify the starting page number. Works numbers the pages sequentially, beginning with the number you specify.



Page Length: 11"
Page Width: 8.5"

Works is preset to print on 8.5-by-11-inch paper. Change the page measurements if you use different size paper.

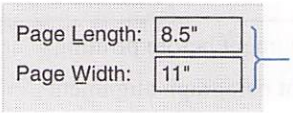
3 Choose the OK button.

To change the page orientation

Will your printer print sideways? *Not every printer can print in landscape orientation. For information about your printer, check your printer documentation.*

1 From the File menu, choose Page Setup & Margins.

2 In the Page Length and Page Width boxes, reverse the measurements.



Page Length: 8.5"

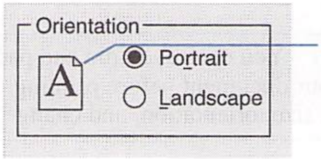
Page Width: 11"

For landscape orientation, reverse the normal portrait measurements.

3 Choose the OK button.

4 From the File menu, choose Printer Setup.

5 Choose either the Portrait or Landscape option button.



Orientation

● Portrait

○ Landscape

In Portrait orientation, pages are longer than they are wide. In Landscape orientation, pages are wider than they are long.

6 Choose the OK button.

Works will now print all pages in either portrait or landscape orientation.

Printing a document

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Word Processor and Draw section of the tutorial.

For information on printing mailing labels and envelopes, see "Printing mailing labels" on page 73 and "Printing single envelopes" on page 75.

For information about all page and margin options, see "Changing page and margin settings" on page 69.

Before printing, check your document for correct formatting and organization. The following table suggests options to check:

To	See page
View a document before printing	67
Set different paragraph alignment	22
Specify other fonts and font sizes	23
Specify headers and footers	56
Set your own page breaks	54
Check your document's spelling	60

Important You can save time and paper if you use print preview to check your document before printing. Then, if necessary, adjust page margins, size, orientation, and change the starting page number.

To print a document

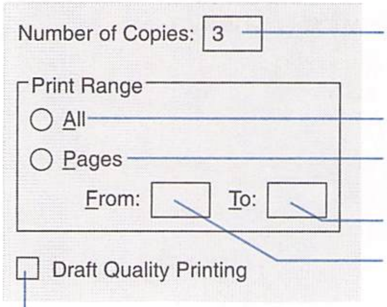
1 On the Toolbar, click the Print button.

Print button

–or–
From the File menu, choose Print.

2 Choose the options you want.

When you print using the Draft Quality Printing option, Works does not print font styles (bold, italic, and underline), and it does not print charts or drawings.



Number of Copies: 3

Print Range
○ All
○ Pages
From: To:

☐ Draft Quality Printing

Type the number of copies of the document you want Works to print.

Choose All to print the entire document.

Choose Pages if you want to print only a portion of the document.

Type the last page to print.

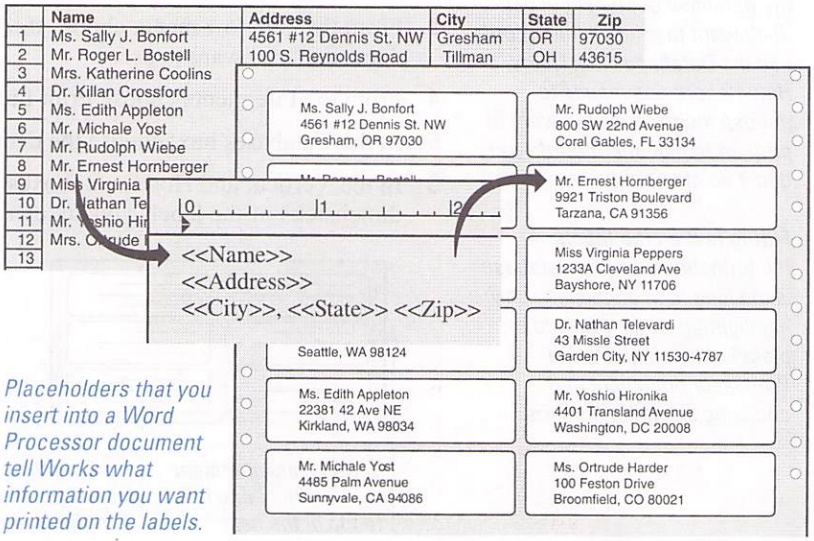
Type the first page to print.

Choose Draft Quality Printing when you want Works to print as quickly as possible.

3 Choose the OK button.

Printing mailing labels

You can use names and addresses in any database to print mailing labels from the Word Processor.



	Name	Address	City	State	Zip
1	Ms. Sally J. Bonfort	4561 #12 Dennis St. NW	Gresham	OR	97030
2	Mr. Roger L. Bostell	100 S. Reynolds Road	Tillman	OH	43615
3	Mrs. Katherine Coolins				
4	Dr. Killan Crossford				
5	Ms. Edith Appleton				
6	Mr. Michale Yost				
7	Mr. Rudolph Wiebe				
8	Mr. Ernest Hornberger				
9	Mis Virginia				
10	Dr. athan Te				
11	Mr. shio Hi				
12	Mrs. rude				
13					

<<Name>>
<<Address>>
<<City>>, <<State>> <<Zip>>

Ms. Sally J. Bonfort
4561 #12 Dennis St. NW
Gresham, OR 97030

Mr. Rudolph Wiebe
800 SW 22nd Avenue
Coral Gables, FL 33134

Mr. Ernest Hornberger
9921 Triston Boulevard
Tarzana, CA 91356

Miss Virginia Peppers
1233A Cleveland Ave
Bayshore, NY 11706

Seattle, WA 98124

Dr. Nathan Televardi
43 Missle Street
Garden City, NY 11530-4787

Ms. Edith Appleton
22381 42 Ave NE
Kirkland, WA 98034

Mr. Yoshio Hironika
4401 Transland Avenue
Washington, DC 20008

Mr. Michale Yost
4485 Palm Avenue
Sunnyvale, CA 94086

Ms. Ortrude Harder
100 Feston Drive
Broomfield, CO 80021

Placeholders that you insert into a Word Processor document tell Works what information you want printed on the labels.

Help creating mailing labels
For help creating a document to print mailing labels, you can use the Mailing Labels WorksWizard to guide you through the steps quickly and easily. See the section "Team up with a WorksWizard" in the book Getting Started. The Mailing Labels WorksWizard uses the names and addresses in your Address Book WorksWizard to print the labels.

About placeholders
A placeholder is a database field name enclosed in chevrons. For example, in the illustration at the right ,«Name» is a placeholder for the Name field. When Works prints the labels, it replaces each placeholder with an entry from the appropriate field in the database.

To create a mailing label document

1 Create a database that has the names and addresses for the labels, or open an existing database.

For information on creating a database, see "Guide to the Database" on page 221.

2 Create a Word Processor document for the mailing labels.

3 From the Insert menu, choose Database Field.

4 In the Databases box, choose the database you want to use.

5 In the Fields box, choose the field you want printed on each label.

6 Choose the OK button.

Works inserts the placeholder into the Word Processor document.

7 Type any text, spaces, or punctuation you want before or after the placeholders.

Example: Type a comma between the «City» placeholder and the «State» placeholder—«City», «State»

8 Repeat steps 3 through 7 for each placeholder you want to insert.

9 Save your document.

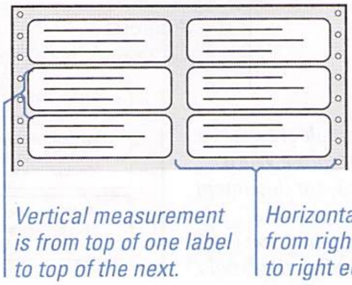
Editing placeholders
Once you've inserted a placeholder, you can copy, move, or delete it in the same way you edit other text. You can also center, left align, or right align placeholders or apply font styles, such as bold or italic.

To print mailing labels

What Works prints
Works only prints names and addresses that are displayed in the database document. If you don't want to print all the records, use the Database Find, Query, or Hide Record commands to choose the records you want to print, or to hide the records you don 't want to print.

Fitting text on the labels
If information from the database is too long to fit on the label, try highlighting all the text and placeholders in the Word Processor document and choosing a smaller font size.

1 Load the labels into your printer if they are not already loaded.
2 Open the Word Processor document and database, if they are not already open.
3 From the Window menu, choose the Word Processor mailing labels document you want to use.
4 From the File menu, choose Print Labels.
5 In the Databases box, choose the database you want to use.
6 In the Vertical and Horizontal boxes, type measurements to match the dimensions of the labels you are using.



Vertical measurement is from top of one label to top of the next.

Horizontal measurement is from right edge of one label to right edge of the next.

7 In the Number Of Labels Across Page box, type the number of labels across the page.
8 To print two rows of labels as a test, choose the Test button.

Make any necessary adjustments to the labels in your printer. If necessary, repeat steps 6 though 8 until the labels print properly.
–or–
To print all the labels, choose the Print button.

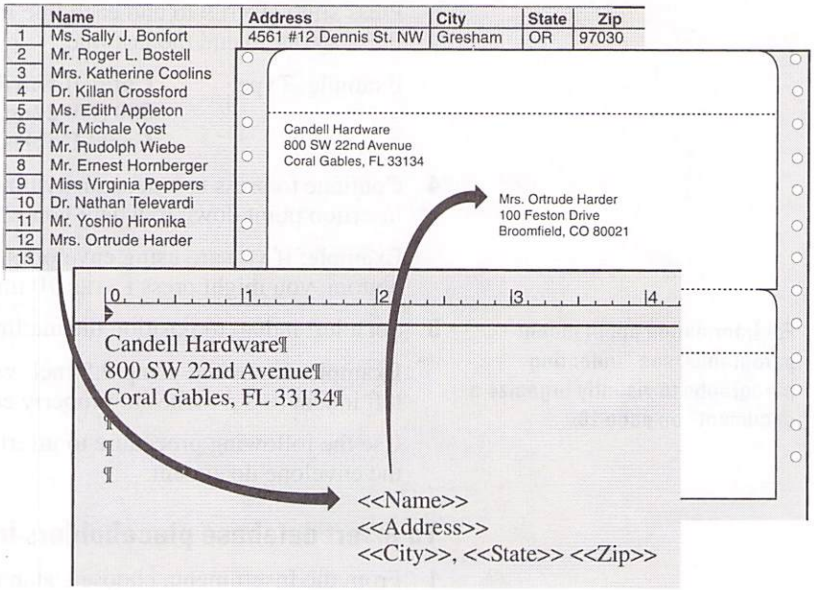
9 In the Page Setup & Margins dialog box, make any necessary changes to the margins and page measurements.
10 Choose the OK button.
11 In the Print dialog box, choose the print options you want.

Usually you print labels using the pre-selected options. If you want to change any options, see "Printing a document" on page 72.

12 Choose the OK button.

Printing envelopes

Printing directly on envelopes can save you the time it takes to handle and paste mailing labels. If your printer can print on envelopes (continuous-form or singly), you can use the following procedures as guidelines. Because there are many kinds of envelopes, you will have to adjust page and margin settings to match the envelopes you are using.



	Name	Address	City	State	Zip
1	Ms. Sally J. Bonfort	4561 #12 Dennis St. NW	Gresham	OR	97030
2	Mr. Roger L. Bostell				
3	Mrs. Katherine Coolins				
4	Dr. Killan Crossford				
5	Ms. Edith Appleton				
6	Mr. Michale Yost				
7	Mr. Rudolph Wiebe				
8	Mr. Ernest Hornberger				
9	Miss Virginia Peppers				
10	Dr. Nathan Televardi				
11	Mr. Yoshio Hironika				
12	Mrs. Ortrude Harder				
13					

Candell Hardware
800 SW 22nd Avenue
Coral Gables, FL 33134

Mrs. Ortrude Harder
100 Feston Drive
Broomfield, CO 80021

Candell Hardware¶
800 SW 22nd Avenue¶
Coral Gables, FL 33134¶
¶
¶
¶

<<Name>>
<<Address>>
<<City>>, <<State>> <<Zip>>

Placeholders you insert into a Word Processor document tell Works what information you want printed on the envelopes.

Printing single envelopes

Some printers have envelope bins or adjustments to their paper trays for individual envelopes. If your printer cannot print individual envelopes, you will need to use form-feed envelopes. See "Printing form-feed envelopes" on page 78.

There are three steps to creating a document to print single envelopes:

- Create an envelope document
- Insert database placeholders
- Set margins and the envelope size

To create an envelope document

For information on opening or creating a database, see "Guide to the Database" on page 221.

1. Create or open a database containing the names and addresses you want to print on your envelopes.
2. From the File menu, choose Create New File, and then choose the Word Processor button.
3. Type your return address, unless you are using pre-printed envelopes.

   Press SHIFT+ENTER to end each line in the address except the last line. Press ENTER to end the last line.

   Example: Type **Candell Hardware**
   800 SW 22nd Avenue
   Coral Gables, FL 33134
4. Continue to press ENTER as many times as necessary to move the insertion point down to where you want the mailing address.

   Example: If you are using envelopes that are 5.5 inches from top to bottom, you might press ENTER 10 times.

For information about indent paragraphs, see "Indenting paragraphs to visually organize a document" on page 18.

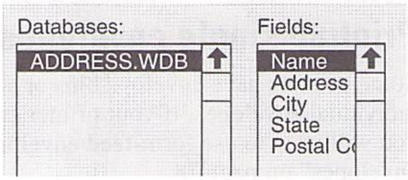
5. Set a left indent to position the mailing address on the envelope.

   Example: If you are using 9.5-inch-wide envelopes, you might set the left indent to 3.5 inches to properly center the mailing address.

   Use the following procedure to insert database field placeholders into the envelope document.

To insert database placeholders into the envelope document

1. From the Insert menu, choose Database Field.
2. In the Databases box, choose the database containing the names and addresses you want to print on the envelopes.



3. In the Fields box, choose a field name for a placeholder.

   Example: Choose the Name field for the first placeholder.
4. Choose the OK button.

   Works inserts a placeholder for the field you chose. When printing envelopes, Works inserts names and addresses from the database in place of the placeholders.

5. Type any text, spaces, or punctuation you want before or after the placeholders.

   Example: Type a comma and a space between the City and the State placeholders—«City», «State».
6. Press SHIFT+ENTER to end each line.
7. Repeat steps 1 through 6 for each database field you want to insert as a placeholder.

   Use the following procedure to specify page and margin settings that match the envelopes you are using.

To set page size and margins to match your envelopes

1. From the File menu, choose Page Setup & Margins.
2. In the Page Length and Page Width boxes, type values to match your envelope size.

   Example: If you are using standard 9.5-inch by 4.125-inch envelopes, in the Page Length box type **4.125in** and in the Page Width box type **9.5in**
3. Type new values for the top and left margins so that the return address will print in the proper location on the envelope.

   Example: To print the return address 0.25 inch from the top of the envelope and 0.50 inch from the left edge, type **.25in** in the Top Margin box and type **.5in** in the Left Margin box.
4. Choose the OK button.

   Your envelopes are now ready to print.

Choosing a page size
Works probably won 't have a page size to exactly match your envelope size. However, it is important that you choose a page size that matches or exceeds the envelope length. Page width is not as critical, as long as it is wide enough to allow for the full width of the address.

Saving your envelope document
Before printing, you should save the document that you have created so that you can use it when you want to print envelopes another time.

To print the envelopes

1. Make sure the paper size setting is for a page that is as least as long as your envelopes.

   Example: If your envelope is 4.125 inches long, choose a setting for a page that is at least as long or longer. For information about setting page size, see “Changing page and margin settings” on page 69.
2. Insert the envelopes into your printer’s tray or bin.
3. Open or switch to the database containing the addresses you want to print.
4. Open or switch to the envelope document.
5. From the File menu, choose Print Form Letters.
6. From the Databases list, choose the database containing the addresses you want to print.

Printing selected names and addresses
Works only prints the names and addresses displayed in the database. If you don’t want to print all the names and addresses, use the Database Query, Find, or Hide Record commands to choose the records you want to print or to hide the records you don’t want to print.

7. Choose the Print button.
8. In the Print dialog box choose the OK button.
9. If the size of your envelopes does not match the page size you set in step 1, Works displays a message noting the mismatch. Simply choose the Continue button to proceed.

Works prints the envelopes with a different mailing address on each.

Printing form-feed envelopes

Form-feed envelopes are attached together in sheets that feed through your printer. There are three steps to creating a document to print form-feed envelopes:

- Create an envelope document
- Insert database placeholders
- Set indents and spacing for the return and mailing addresses

To create an envelope document

1. Create or open a database containing the names and addresses you want to print on your envelopes.
2. From the File menu, choose Create New File, and then choose the Word Processor button.
3. Type your return address, unless you are using pre-printed envelopes.

   Press SHIFT+ENTER to end each line except the last line. To end the last line, press ENTER.

   Example: Type **Candell Hardware**
   800 SW 22nd Avenue
   Coral Gables, FL 33134
4. Continue pressing ENTER as many time as necessary to move the insertion point down to where you want to position the mailing address.

   Example: If you are using envelopes that are 5.5 inches from top to bottom, you might press ENTER 10 times.

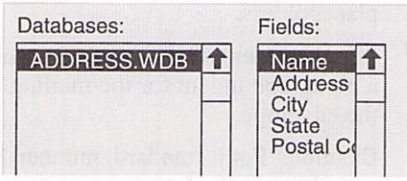
   Use the following procedure to insert database field placeholders into the envelope document.

To insert database placeholders into the envelope document

1 Position the insertion point on the line where you want to begin each envelope's mailing address.

2 From the Insert menu, choose Database Field.

3 In the Databases box, choose the database containing the names and addresses you want to print on the envelopes.



4 In the Fields box, choose a field name for a placeholder.

Example: Choose the Name field as the first placeholder.

5 Choose the OK button.

Works inserts the placeholder for the field you chose. When printing the envelopes, Works inserts names and addresses from the database in place of the placeholders.

6 Type any text, spaces, or punctuation you want before or after the placeholders.

Example: Type a comma and a space between the City placeholder and the State placeholder—«City», «State».

7 Press SHIFT+ENTER to end each line.

8 Repeat steps 1 through 7 for each database field you want to insert as a placeholder.

Use the following procedure to set the line spacing and indents for the return address and the mailing address.

To set indents and spacing for the addresses

1 Move the insertion point to the first line of your return address.

2 From the Format menu, choose Indents & Spacing.

3 In the Left Indent box, type a value that will properly position the return address on the envelope.

Example: To indent the address one-half inch, type **0.5in**

4 In the Space Before Paragraph box, type a value equal to the size of the envelope flap plus the space you want between the top of the envelope and the beginning of the return address.

Example: If the envelope flap is one inch, type **1.25in** to position the return address 0.25 inch below the top edge of the envelope.

5 Choose the OK button.

6 Move the insertion point to the first line of the mailing address placeholders.

For information about indenting paragraphs, see "Indenting paragraphs to visually organize a document" on page 18.

7 Use the Indents & Spacing command from the Format menu to set a paragraph indent for the mailing address to properly center it on the envelope.

Example: For a standard, number 10 form-feed envelope, you might type **3.5in** in the Left Indent box.

8 Choose the OK button.

To print form feed envelopes

Choosing a page size
Works probably won't have a page size to exactly match your envelope page. However, it is important that you choose a page size that matches the envelope page length, or Works cannot position addresses properly. Page width is not as critical, as long as it is wide enough to allow for the full width of the address.

Printing selected names and addresses
Works only prints the names and addresses displayed in the database. If you don't want to print all the names and addresses, use the Database Query, Find, or Hide Record commands to choose the records you want to print or to hide the records you don't want to print.

1 Make sure the paper size setting exactly matches your envelope's page length, and the setting's page width is as close as possible to the envelope's page width.

For more information about setting page size, see "Changing page and margin settings" on page 69.

2 If you have not already done so, insert the envelopes into your printer.

3 Open or switch to the database containing the addresses you want to print.

4 Open or switch to the Word Processor form you created.

5 From the File menu, choose Print Labels.

6 From the Databases list, choose the database containing the addresses you want to print.

7 Type label spacings to match the size of your envelopes, including the envelope flaps.

Example: For standard, number 10 formfeed envelopes, type **5.5in** in the Vertical box, and type **10in** in the Horizontal box.

8 If the value in the Number Of Labels Across Page box is not set at 1, type **1** in that box.

9 Choose the Print button.

10 In the Page Setup & Margins dialog box, type **0** (zero) as the value for each margin (Top, Bottom, Left, Right, Header, and Footer).

11 In the Page Length and Page Width boxes, type values to match your envelope page.

Example: For standard-sized envelope forms, type **11in** for the page length and **10in** for the page width.

12 Choose the OK button.

13 In the Print dialog box, choose the OK button.

14 If the page size of your envelope forms does not match the page size you set in step 1, Works displays a message noting the mismatch. Simply choose the Continue button to proceed.

Works prints the envelopes, with a different mailing address on each.

Creating a template document

A useful template
You might create a template document that contains header and footer paragraphs, prints all text in a specific font, has a specific paragraph format, and contains text and art for your company letterhead.

A template is a document you create to reduce the need to do the same work over and over. It can contain the settings, text, and formats that do not change from document to document.

When you create a template, Works turns on the Word Processor template option and automatically includes the template information and settings in any new documents you create.

You can turn off the template option at any time in order to create new documents that do not contain the template information or settings. If you later want to include other information in your template, you can change it. You can also create a totally new template and save it in place of the existing template.

To create a template document for the first time or to replace an existing template document

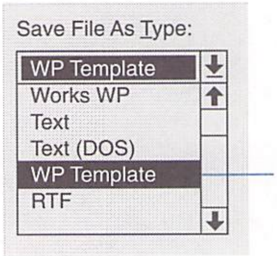
1 Create a new Word Processor document, or open an existing document that you want to turn into a template.

2 Type any text or add any graphics that you want included in the template.

3 Make any settings that you want included in the template. For example: margin settings, font and font size selections, and so on.

4 From the File menu, choose Save As.

5 In the Save File As Type box, choose WP Template.



When you choose the WP Template file type, Works includes all of the information in the template document in every new document you create.

Works names the template document for you. The Word Processor template is named TEMPLATE.PS.

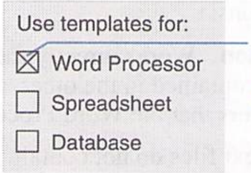
6 Choose the OK button.

If a template document already exists, Works asks if you want to replace the existing file. Choose the OK button to replace the old template document with the one you have just created.

To turn off or on the template option

1 From the Options menu, choose Works Settings.

2 Under Use Templates For, choose the Word Processor check box.



Use templates for:

☒ Word Processor

☐ Spreadsheet

☐ Database

An X is displayed in the Word Processor check box when the template option is turned on.

3 Choose the OK button.

To change a template

1 From the File menu, choose Open Existing File.

2 In the List Files Of Type box, choose All Files (*.*).

3 In the File Name box, choose TEMPLATE.PS.

Works named the Word Processor template TEMPLATE.PS.

4 Choose the OK button.

5 Make any changes you want to the template document.

6 From the File menu, choose Close.

7 When asked if you want to save your changes to the template file, choose the Yes button.

Sharing information with other applications

There are two ways the Word Processor can open documents created by other applications:

- **By translation** Works directly translates the special codes and characters contained in the other application's documents into codes and characters that the Word Processor recognizes.
- **As text** Text files do not contain any special characters or codes such as those that control fonts, font styles, margins, and paragraph formatting. Works can open text files without the need for translation.

Opening and saving documents using direct translation

Works can directly open documents in the Word Processor that were created in some other applications. It can also save Word Processor documents in the correct format so that these applications can open them. For instance, Works can open files created in:

- Microsoft® Word
- Microsoft® Word for Windows
- Microsoft® Windows Write
- WordPerfect

To open a document that Works can translate

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type box, choose the type of document you want to open.

   If the document type is not listed, Works cannot translate that type of file, and you must first save the file as a text file. See the following section "Opening and saving text documents."
3. In the File Name list box, choose the document you want to open.
4. Choose the OK button.

To save a document in another application's format

1. Create or open the document you want to save.
2. From the File menu, choose Save As.
3. In the File Name box, type a name for the document you want to save.
4. From the Save File As Type box, choose the application you want to save the document for.
5. Choose the OK button.

   Works saves the document in the specified format, and you can open it in the other application.

Opening and saving text documents

A text document does not contain the codes that make text bold, italic, or underline. Nor does it contain codes to specify fonts or font sizes, margins or paragraph indent settings.

Most applications, including the Works Word Processor, can create and open text documents. If you cannot directly open an application's document in the Word Processor, check to see if that application can save documents as a text file (sometimes called ASCII documents or files).

To open a text document

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type box, choose Text if the document has the filename extension .TXT. Otherwise choose All Files.
3. In the File Name box, choose the document you want to open.
4. Choose the OK button.

   Works opens the document, and you can edit, format, and print it in the same way you can any Word Processor document.

To save a document as a text document

1. Create or open the document you want to save.
2. From the File menu, choose Save As.
3. In the File Name box, type a name for the document you want to save.
4. From the Save File As Type box, choose Text.
5. Choose the OK button.
6. When Works asks if you want to save the document without formatting, choose the OK button.

   Works saves the document as a text document and gives it the filename extension .TXT unless you gave it a different extension when you typed the filename. Any special formatting, such as fonts, font styles, paragraph alignment, and so on, is lost.

Naming, saving, duplicating, and reopening a document

For a tutorial, press SHIFT+F1 and go to the "Getting to work" lesson in the Starting with Works section of the tutorial.

After you create a document you should immediately save it to disk. Until you save your work on a disk, it is temporary (stored only in the computer's memory) and can be lost because of a power interruption or equipment failure.

Besides saving a document, you can:

- Duplicate it to create an new document. This is useful when you want two documents that are similar, but not exactly the same (for example, to send similar letters to two clients).
- Make an identical, backup copy as extra protection against losing your work. When you turn on the Make Backup Copy option, Works updates the backup copy every time you save the original file.
- Reopen the document to change, view, or print it.

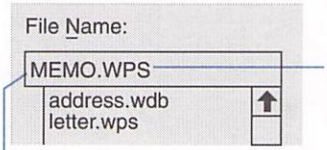
You can also open documents created by others, and you can open any of the sample documents that come with Works, in order to view them or to adapt them to your own use. For more information on opening and using the sample documents that come with Works, see "Jump Right In" in *Getting Started.*

To name and save a document and make a backup copy

To name and save a document in other formats
If you want to save a Works document to use with another application, such as Microsoft Word for Windows, see the section "Sharing information with other applications" on page 84.

1 From the File menu, choose Save As.

2 In the File Name box, type a name for the file.



File Name: MEMO.WPS

The filename extension indicates the document type, such as .WPS for Word Processor.

A filename can contain eight or fewer characters.

You do not need to type the filename extension .WPS. Works automatically adds it to the filename you type.

3 To make a backup copy of the document, choose the Make Backup Copy check box.

Works will make a new backup each time you save the document.

4 Choose the OK button.

To duplicate a document

1. If you have not already done so, save the document you want to duplicate.
2. From the File menu, choose Save As.
3. In the File Name box, type a new name for the duplicate document.

   Example: If the original document is named MEMO.WPS, you might type **Memo2** as the name of the duplicate document.
4. Choose the OK button.

   Works gives the document the new name you specified and saves it. The original document still exists and you can open it again if you want.

To open an existing document

For help finding your files
For information on locating files that are in other directories, press ALT+H and choose the Help topic "Opening an existing document." For more information about opening files created in other applications, see "Sharing information with other applications" on page 84.

1. From the File menu, choose Open Existing File.
2. From the list of files in the File Name box, choose the file you want to open.
3. Choose the OK button.

   If the document you want to open is not listed in the Open dialog box, it either doesn't exist in the current directory or it is not a typical Word Processor document.

Setting which files to open when you start Works

Turn off the Welcome
The first time you open Works, a Welcome dialog box is displayed. If you want to skip this screen each time you start Works, choose the Skip Welcome Screen button. If you later need introductory information, choose Tutorial from the Help menu.

If you regularly work with the same documents, you can save your workspace so that Works will open those documents automatically every time you start Works. For example, if you regularly print labels using a Word Processor document and an address book database document, you might want Works to open those documents every time it starts.

When Works automatically opens the documents you specify, it also arranges and sizes your document windows exactly as you left them.

If you set Works to open specific documents, you might not want it to display the Startup dialog box each time it starts. If you want, you can set Works so that it will no longer display this dialog box during startup.

To open specific documents every time you start Works

1. Open all the documents you want Works to open when it starts.

   You can open any Word Processor, Spreadsheet, or Database documents.

2. Arrange the document windows exactly the way you want them.
3. From the File menu, choose Save Workspace.

   Works stores the information it needs to open your files in exactly the same arrangement the next time you start Works. It also chooses the Use Saved Workspace check box in the Works Settings dialog box.

To reset Works so it doesn' t open specific documents during startup

1. From the Options menu, choose Works Settings.
2. In the Works Settings dialog box, choose the Use Saved Workspace check box.

   A check box that doesn't have an X in it is cleared. To turn the option back on, choose the check box again.

3. Choose the OK button.

To turn off the Works startup dialog box

1. Start Works in the normal manner.
2. From the Options menu, choose Works Settings.
3. In the Works Settings dialog box, clear the Show Startup Dialog option.

   A check box that doesn't have an X in it is cleared. To turn the option back on, choose the check box again.
4. Choose the OK button.

Dialing a telephone number that is in a document

No modem, no dialing
If you do not have a modem, you cannot use automatic dialing.

Is your modem Hayes-compatible?
To determine if your modem is Hayes-compatible, see your modem documentation.

If you have a Hayes-compatible modem, you can use Works to automatically dial a telephone number to talk with someone. For example, if your bank's name and telephone number are included anywhere in your document, and you need to confirm a deposit or other transaction, you can highlight the number in the document, automatically dial the number, and then pick up your telephone when the other party answers. You can also include "in-house" extensions, and quickly contact co-workers or team project members regarding specific portions of your document.

The telephone number you highlight must contain any special codes you would normally dial by hand. For example, to dial long distance you must include a 1 before the area code. For an in-house call, you simply enter the number into your document in the same way you would dial it yourself.

To automatically dial a telephone number

Disconnect from other computers
You cannot dial a telephone number if you are already connected to another computer.

1. Open or switch to the document containing the telephone number you want to dial.
2. Highlight the telephone number.
3. From the Options menu, choose Dial This Number.
   Works dials the number, and then displays a message.
4. Pick up your telephone, and then choose the OK button.
   –or–
   If the call did not go through or you want to cancel automatic dialing, choose the Cancel button.

   Works returns to your document.
5. When you're finished with the call, hang up the telephone.

Closing a document and quitting Works

When you're finished with a document, you have three options—close the document you are working on, make the document an icon on the workspace, or close the document and quit Works.

Minimizing document windows
When you minimize a document window, an icon representing the tool the document was created with is displayed at the bottom of the Works workspace, along with the name of the document that was in the window when it was minimized. Each Works tool has its own icon.

To minimize the active document

▶ Click the Minimize button.
–or–
Press ALT+HYPHEN to open the Control menu, and then choose Minimize.

To restore a minimized document

▶ Double-click the minimized document icon.
–or–
Press ALT+HYPHEN to open the Control menu, and then choose Restore.

To close the active document

▶ From the File menu, choose Close.
–or–
Press CTRL+F4.

You may see a message asking if you want to save the document before closing. Choose the Yes button to ensure that the changes you have made are not lost. Choose the No button to discard any changes you have made.

To quit Works

▶ From the File menu, choose Exit.
–or–
Press ALT+F4.

You may see a message asking if you want to save the document before closing. Choose the Yes button to ensure that the changes you have made are not lost. Choose the No button to discard any changes you have made.

Guide to the Spreadsheet

For a tutorial, press SHIFT+F1 and go to the "Introducing the Spreadsheet" lesson in the Spreadsheet and Charting section of the tutorial.

The Microsoft Works for Windows Spreadsheet is a calculating tool you can use in your home and your business for financial planning, budgeting, and recordkeeping. For example, you can use the Works Spreadsheet to track your monthly sales, prepare a quarterly budget, or record and automatically update your students' grades or your team's batting averages.

Works even allows you to compare possibilities: using Works features, you can quickly and easily manipulate numbers to create forecasts and projections that answer your "what if" questions. The Spreadsheet provides commands, options, and functions for entering and updating computations, allowing you to change your information as often as you like.

Here's what to do if you are new to spreadsheets:

To	See	On page
Create a basic spreadsheet	Beginning a spreadsheet	94
Change your spreadsheet	Changing text, values, or formulas	115
	Changing number formats	117
	Copying and moving cell contents	119
	Changing the appearance of a spreadsheet	123
Use formulas in a spreadsheet	Entering a formula	104
Save a spreadsheet	Naming, saving, duplicating, and reopening a spreadsheet	170
Print a spreadsheet	Printing a spreadsheet	163

Beginning a spreadsheet

For a tour of Spreadsheet features, press SHIFT+1 and go to the "Introducing the Spreadsheet" lesson in the Spreadsheet and Charting section of the tutorial.

Before starting Works for the first time, you must install it on your computer. For information on how to install and start Works, see "Installing Works on your computer" in *Getting Started.*

You can begin a new spreadsheet when you start Works or at any time while you are using Works. You can also open a previously created spreadsheet anytime while you are using Works.

To start Works and create a new spreadsheet or open a previously saved spreadsheet

To quickly display the Startup dialog box
You can also display the Works Startup dialog box by double clicking anywhere in the Works workspace. The workspace is the area behind document windows.

1 In the Solution Series group window, double-click the Microsoft Works program item.

Works displays the Startup dialog box.

2 Choose the Spreadsheet button to create a new spreadsheet.
–or–
Choose the Open Existing File button to open a previously saved spreadsheet.

To create a new spreadsheet when Works is already started

For information on opening and using the template files that came with Works, see "Jump right in" in *Getting Started.*

1 From the File menu, choose Create New File.

Works displays the Create New File dialog box.

2 Choose the Spreadsheet button to create a new spreadsheet.

A new spreadsheet opens, and you can begin entering text and numbers.

To open an existing spreadsheet when Works is already started

For information about closing a spreadsheet or quitting Works, see "Closing a spreadsheet and quitting Works" on page 174.

1 From the File menu, choose Open Existing File.

2 From the list of files in the Open dialog box, choose the document you want.

3 Choose the OK button.

Entering information

For a tutorial, press SHIFT+F1 and go to the "Entering text and numbers" lesson in the Spreadsheet and Charting section of the tutorial.

For more information on entering specific kinds of information into a spreadsheet, see "Entering text" on page 101, "Entering a number" on page 102, or "Entering a formula" on page 104.

You can enter three types of information into a spreadsheet:

Text Headings, labels, notes, and explanatory text.

Values Numbers you type directly into a spreadsheet cell. Values can include numbers, dates or times.

Formulas Equations that calculate a new value from existing values. Formulas always begin with an equal sign (=).

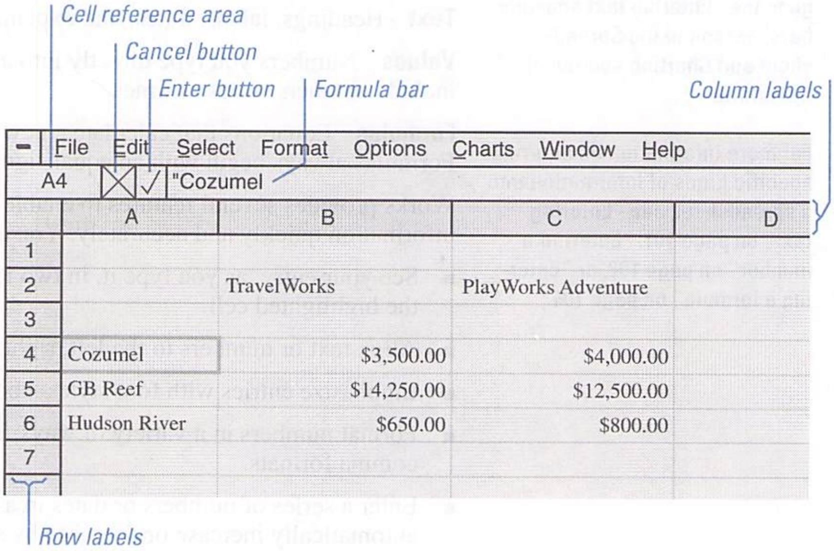
Works provides several features to enable you to enter and edit information quickly and accurately. You can:

- See your entry, as you type it, in two locations—the formula bar and the highlighted cell.
- Align text or numbers to the left, right, or in the center of cells.
- Emphasize entries with font styles—bold, italic, and underline.
- Format numbers in a variety of ways, including percent, currency, and comma formats.
- Enter a series of numbers or dates in a row or column that automatically increase or decrease by specified increments.
- Make changes to entries whenever you need to—while you are typing or after you've entered the information.

What's highlighting?
Highlighting is the way you tell Works which cells you want to work with. If you're unfamiliar with highlighting, see "Highlighting to make changes" on page 98.

You enter information into a spreadsheet cell, which is where a row and column intersect. To enter information into a cell, you must first move the highlight to the cell. When you open a new spreadsheet, the highlight is located in cell A1. "A1" refers to the location of the cell—in this case, the intersection of column A and row 1. You can begin typing into that cell, or you can use the arrow keys or your mouse to move the highlight to the cell in which you want to place the information.

The following illustration shows important reference areas in the spreadsheet window.


Cell reference area
Cancel button
Enter button
Formula bar
Column labels
Row labels
File
Edit
Select
Format
Options
Charts
Window
Help
A4
"Cozumel

	A	B	C	D
1				
2		TravelWorks	PlayWorks Adventure	
3				
4	Cozumel	$3,500.00	$4,000.00	
5	GB Reef	$14,250.00	$12,500.00	
6	Hudson River	$650.00	$800.00	
7				

As you type, what you type is displayed in both the formula bar and the highlighted cell. You can type up to 255 characters in a cell.

To enter information

1 Highlight the cell in which you want the information to appear.

2 Type your entry.

What you type is displayed in both the cell and in the formula bar.

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

Naming and saving a spreadsheet

For a tutorial, press SHIFT+F1 and go to the "Working with files" lesson in the Starting with Works section of the tutorial.

Until you save a spreadsheet, all your work is held in the computer's memory. This is temporary; a power interruption or turning off your computer clears the computer memory, and any work you haven't saved is lost. Saving a spreadsheet moves it from the computer's memory to a floppy disk or a hard disk, where it won't be affected by power interruptions or turning off your computer.

When you create a new spreadsheet, Works gives it a name, such as Sheet1. You can change this to a name that better describes the contents of the spreadsheet, such as BUDGET.WKS.

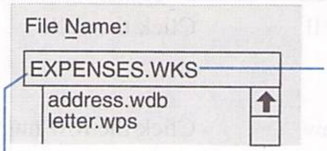
To name and save a spreadsheet for the first time

1 From the File menu, choose Save.

2 In the File Name box, type a name for the document that is no more than eight characters long.

Works automatically supplies the three-character filename extension .WKS, which indicates this is a spreadsheet document.

Special characters in filenames
In addition to letters and numbers, you can use the following special characters in a filename: ', @, $, %, &,), (, }, {, -, _, ~, and #. If you use other special characters, Works may display a message telling you the filename is not valid, and you will have to type a new filename.



File Name: EXPENSES.WKS

The filename extension indicates the document type, such as .WKS for Spreadsheet.

A filename can contain eight or fewer characters.

3 Choose the OK button.

To save a spreadsheet as you work

▸ From the File menu, choose Save.

Save often
After saving a spreadsheet for the first time, continue to save often during your work session to avoid losing your work due to equipment or power failure.

To open a spreadsheet you saved previously

1 From the File menu, choose Open Existing File.

2 From the list of files in the File Name box, choose the file you want to open.

3 Choose the OK button.

Highlighting to make changes

Highlighting is the way you tell Works which cells you want to work with. You can move the highlight to any cell, and you can extend the highlight over a group of cells. Then, the next command you choose acts on those highlighted cells. For example, you first highlight cells before you copy, move, delete, or format them.

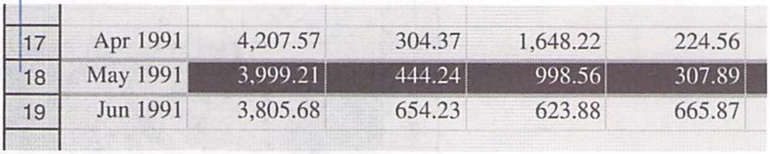
To highlight a cell, row, column, or range

▶ Choose a method from the following table:

To highlight	With the mouse	With the keyboard
A cell	Click the cell.	Press an arrow key to move the highlight to the cell you want.
A row	Click the row number.	Move the highlight to a cell in the row you want to highlight, and then press CTRL+F8.
A column	Click the column letter.	Move the highlight to a cell in the column you want to highlight, and then press SHIFT+F8.
A group of cells	Drag from the upper-left cell of the group you want to highlight to the lower-right cell of the group.	Highlight the cell at the upper-left corner of the group you want to highlight, press F8+arrow keys to extend the highlight, and then press F8 again to cancel highlighting.
The entire spreadsheet	Click the box to the left of column A and above row 1.	Press CTRL+SHIFT+F8.

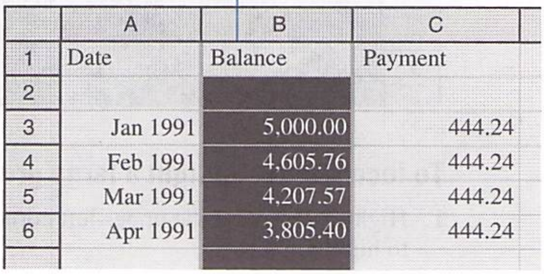
To cancel an extended highlight

▶ Click anywhere in the spreadsheet.
–or–
Press ESC as many times as necessary to remove the highlight from the selection.



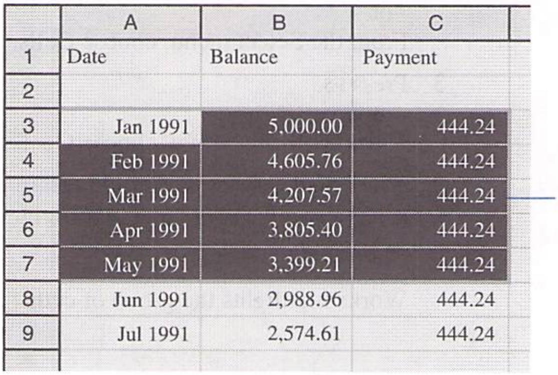
You can highlight an entire row by clicking the row number.

17	Apr 1991	4,207.57	304.37	1,648.22	224.56
18	May 1991	3,999.21	444.24	998.56	307.89
19	Jun 1991	3,805.68	654.23	623.88	665.87



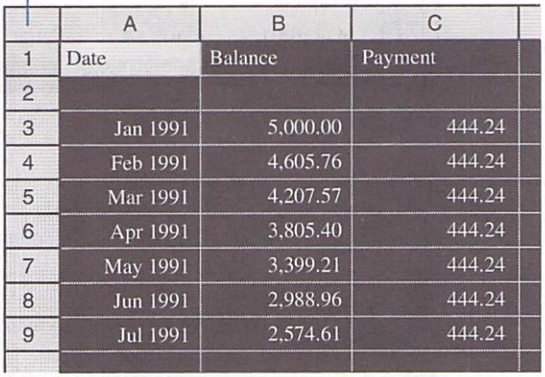
You can highlight an entire column by clicking the column letter.

	A	B	C
1	Date	Balance	Payment
2			
3	Jan 1991	5,000.00	444.24
4	Feb 1991	4,605.76	444.24
5	Mar 1991	4,207.57	444.24
6	Apr 1991	3,805.40	444.24



You can highlight a range.

	A	B	C
1	Date	Balance	Payment
2			
3	Jan 1991	5,000.00	444.24
4	Feb 1991	4,605.76	444.24
5	Mar 1991	4,207.57	444.24
6	Apr 1991	3,805.40	444.24
7	May 1991	3,399.21	444.24
8	Jun 1991	2,988.96	444.24
9	Jul 1991	2,574.61	444.24



Click here to highlight the entire spreadsheet.

	A	B	C
1	Date	Balance	Payment
2			
3	Jan 1991	5,000.00	444.24
4	Feb 1991	4,605.76	444.24
5	Mar 1991	4,207.57	444.24
6	Apr 1991	3,805.40	444.24
7	May 1991	3,399.21	444.24
8	Jun 1991	2,988.96	444.24
9	Jul 1991	2,574.61	444.24

To locate and highlight a large group of cells

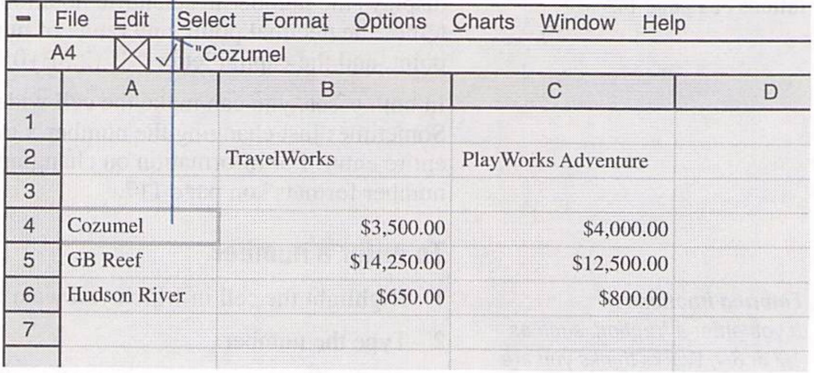
1. Highlight a cell at the upper-left corner of the group of cells you want to highlight.
2. Press F8.
   –or–
   From the Select menu, choose Cells.
3. Press F5.
   –or–
   From the Select menu, choose Go To.
4. Type the cell reference of the cell in the lower-right corner of the group of cells you want to highlight.
5. Choose the OK button.

   Works highlights the group of cells.

Entering text

You can use text in your spreadsheet to provide labels or give instructions. Or you can use the spreadsheet to create tables, which you can later move to a Word Processor document without having to retype the whole table.

When you enter text into a cell, it is displayed in the formula bar preceded by a double quotation mark, which indicates that the entry is text and not a calculating value.



A4 "Cozumel

	A	B	C	D
1				
2		TravelWorks	PlayWorks Adventure	
3				
4	Cozumel	$3,500.00	$4,000.00	
5	GB Reef	$14,250.00	$12,500.00	
6	Hudson River	$650.00	$800.00	
7				

For information on changing the alignment of cell contents, see "Changing cell alignment" on page 124.

If you enter text that is longer than the width of the cell, the excess text is displayed in the cells to the right, if those cells are empty. If the cells are not empty, Works displays as much text as there is room for. The complete entry is displayed in the formula bar, and you can widen the column to display all the text in the cell.

To enter text

1 Highlight the cell in which you want the text.

2 Type the entry.

Works displays the entry in both the cell and formula bar.

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

Works automatically left-aligns text entries, but you can change the alignment at any time.

Names and months of the year
If you type a name that is also a month of the year (April, May, or June, for example), Works assumes that you are entering a date and will format your entry accordingly. If you want Works to treat it as text, type a double quotation mark before the name. For example: type **"April**

Entering a number

For more information on changing number formats, see "Changing number formats" on page 117.

The Works Spreadsheet can calculate numbers, dates, and times. Unless you choose a different format, Works displays numbers in general format—numbers are aligned to the right of a cell. Other number formats you can choose include the fixed, currency, comma, percent, exponential, leading zeros, and true/false formats.

For information on entering dates and times, see "Using dates and times for references and calculations" on page 142.

If you enter a number that is too large to fit into a cell that is formatted in other than general format, Works displays ##### in the cell. If you enter a number that is too large to fit into a cell that has general format, Works displays the number in scientific notation—that is, with one digit to the left of the decimal point, any range of numbers to the right of the decimal point, and the capital letter "E" (2.5E+05, for example).

In both cases, you can make the cell wider in order to see the entire entry. Sometimes just changing the number's format makes it possible to see the entire entry. For information on changing a cell's format, see "Changing number formats" on page 117.

To enter a number

Entering fractions
If you enter a fraction, such as 1/2 or 3/4, Works thinks you are entering a date and formats it accordingly. Type a zero and a space before the fraction so that Works will recognize that it is a fraction and give it a decimal format. For example, type **0** *press SPACEBAR, and then type* **3/4** *and Works will display 0.75 in the cell.*

1. Highlight the cell in which you want the number.
2. Type the number.

   Works displays the number in the cell and in the formula bar.
3. Click the Enter box in the formula bar.

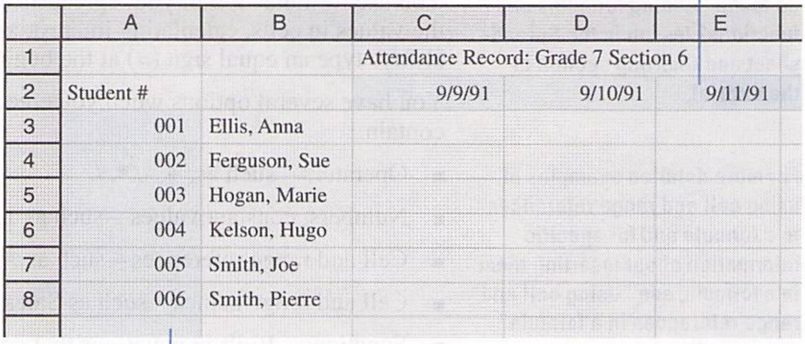
   –or–

   Press ENTER.

Entering a series of numbers or dates

For a tutorial, press SHIFT+F1 and go to the "Copying cells" lesson in the Spreadsheet and Charting section of the tutorial.

You can enter a series of numbers or dates in a row or column that automatically increase or decrease by specified increments. You can number cells in a row or column from 1 to 100 or you can enter a schedule of regular meeting dates. You can quickly determine the specific dates of a weekly meeting by filling cells in a row or column with dates that progress by 7-day increments.



You can fill columns or rows of adjacent cells with a series of dates or numbers. This row contains a series of dates in increments of weekdays.

	A	B	C	D	E
1			Attendance Record: Grade 7 Section 6		
2	Student #		9/9/91	9/10/91	9/11/91
3	001	Ellis, Anna			
4	002	Ferguson, Sue			
5	003	Hogan, Marie			
6	004	Kelson, Hugo			
7	005	Smith, Joe			
8	006	Smith, Pierre			

This column contains a series of numbers in increments of 1.

To enter a series of numbers or dates

1 Type a starting value—a number or a date—into the cell in which you want to start the series.

2 Click the Enter box in the formula bar.
–or–
Press ENTER.

3 Highlight the cell with the starting value, and extend the highlight to the right or down to include the cells into which you want to enter the series.

4 From the Edit menu, choose Fill Series.

Want to change a series unit or increment?
You can highlight the series again, and then, in the Series dialog box, choose another increment unit or value. Works will automatically make the change when you choose the OK button.

5 Under Units, choose the option you want: Number, Day, Weekday, Month, or Year.

The options Day, Weekday, Month, and Year are available only if your starting value is formatted as a date.

6 In the Step By box, type the increment you want for the series.

A negative value will create a decreasing series.

7 Choose the OK button.

Entering a formula

For a tutorial, press SHIFT+F1 and go to the "Adding formulas and functions" lesson in the Spreadsheet and Charting section of the tutorial.

For more detailed examples of using cell and range references in a formula and for specific information about inserting them in a formula, see "Using cell and range references in a formula" on page 133.

A formula is an equation that calculates a new value from existing values. You use formulas for all your spreadsheet calculations—such as adding the values in cells, calculating interest, and totalling columns. You must always type an equal sign (=) at the beginning of a formula.

You have several options when you create a formula. Formulas can contain:

- Operators—such as, +, -, *, /.
- Numbers, constant values—such as 1, 10, 544, -56, and 22.3.
- Cell and range references—such as A1, D10, and A1:E8.
- Cell and range names—such as Sales, Expenses, and Income.
- Functions—Built-in equations that come with Works, such as addition (SUM), average (AVG), and rounding (ROUND).

You can use these elements of a formula in many different combinations.

To quickly get a total

1. Highlight an empty cell at the end of the column or row that contains the numbers you want totalled.
2. On the Toolbar, click the Autosum™ button.
   –or–
   Press CTRL+M.

   Works looks up and then left for cells to include in the formula, and then displays the range references that are being summed in the formula bar.

   If Works can't find a column or row to calculate, it displays =SUM() in the formula bar. Between the parentheses, type the range references of the column or row you want to sum.
3. Click the Enter box in the formula bar.
   –or–
   Press ENTER.

Using operators and functions in formulas

Both operators and functions tell Works what you want it to do with the numbers that are included or referred to in your formula.

Operators perform all the basic mathematical operations that you are probably already familiar with, including addition (+), subtraction (-), multiplication (*), and division (/). Examples of simple formulas that use operators and constant values include:

- =12*5
- =36+15
- =365-14

For a complete listing of the functions available with Works, see "Appendix A: Spreadsheet and Database functions" on page 371.

Functions perform more complicated mathematical and logistical operations. Works has 57 functions, which enable you to enter complicated formulas quickly and easily. The built-in functions can perform common spreadsheet tasks, such as:

- Adding the values in a group of cells (SUM).
- Calculating a fixed rate of interest (RATE).
- Finding the average of the numbers in a group of cells (AVG).
- Determining the payment amount of a loan that will be paid back in installments (PMT).
- Finding the amount of depreciation over a specific period (SYD).
- Calculating the future value of an ordinary annuity (FV).

How Works calculates

If you type the formula **=2*12+6** *Works first multiples 2 times 12 to get 24, and then adds 6, for a total of 30.*

If you type the formula **=(20-5)/3** *Works first subtracts 5 from 20 because that formula is in parentheses, and then divides the result, 15, by 3, for a final value of 5.*

When you create a formula that includes more than one operator, Works follows standard algebraic rules (also known as the standard order of evaluation) to evaluate the formula. The standard order of evaluation determines in which order Works performs mathematical operations in formulas that contain more than one operator or function. Works evaluates operators in formulas in this order:

- First, the contents within parentheses, working from the innermost set of parentheses out.
- Second, operators in standard order of evaluation.
- Third, from left to right, if two or more operators have the same order of evaluation.

The following table shows Works operators and their order of evaluation:

Operator	Order of evaluation
^ (exponential)	First
- (negative), + (positive)	Second
* (multiplication), / (division)	Third
+ (addition), - (subtraction)	Fourth
= (equal to), <> (not equal to)	Fifth
< (less than), > (greater than), <= (less than or equal to), and >= (greater than or equal to)	
~ (NOT)	Sixth
¦(OR), & (AND)	Seventh

To enter a formula using operators

1. Highlight the cell in which you want to place the formula.
2. Type = (equal sign), followed by the formula.

   Example: Type **=8+11**
3. Click the Enter box in the formula bar.
   –or–
   Press ENTER.

   Works displays the result in the cell, and the formula that created it is displayed in the formula bar.

Manually calculating
Whenever you change a value in a spreadsheet, Works begins recalculating the spreadsheet. Most of the time the recalculation seems to be instantaneous. If your spreadsheet is large or incomplete, you may want Works to wait to recalculate. Choose the Manual Calculation command from the Options menu. Then when you're ready for Works to recalculate, press F9.

To enter a formula using functions

1. Highlight the cell in which you want to place the formula.
2. Type = (equal sign), followed by the function.

   Example: Type **=SUM**
3. Within parentheses, type the values or references to values that you want the function to evaluate.

   Example: Type **=SUM (7,8,9)**

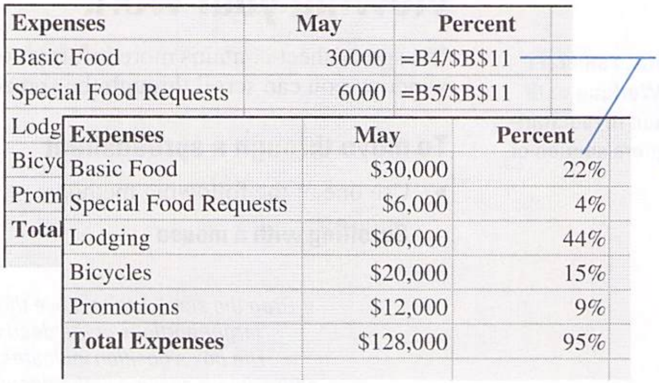
   Your formula now looks like this: =Sum(7,9,9)
4. Click the Enter box in the formula bar.
   –or–
   Press ENTER.

   Works displays the result in the cell, and the formula that created it is displayed in the formula bar.

Formulas with functions need parentheses
When you use a function in a formula, be sure to enclose the values or references you want the formula to evaluate in parentheses. Otherwise, Works may display an error message.

Displaying formulas

Searching with formulas displayed
With the formulas displayed in cells, you can use the Find command from the Select menu to find formulas that contain specific range names and cell references. For more information on searching your spreadsheet, see "Searching for specific text or values" on page 145.



Expenses	May	Percent
Basic Food	30000	=B4/$B$11
Special Food Requests	6000	=B5/$B$11
Lodg		
Bicyc		
Prom		
Total		

Expenses	May	Percent
Basic Food	$30,000	22%
Special Food Requests	$6,000	4%
Lodging	$60,000	44%
Bicycles	$20,000	15%
Promotions	$12,000	9%
Total Expenses	$128,000	95%

Turning on Show Fomulas reveals the formulas that produced these values.

To show or hide formulas

▶ From the Options menu, choose Show Formulas.

When Show Formulas is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Formulas, choose the command again.

Moving around in a spreadsheet and viewing your work

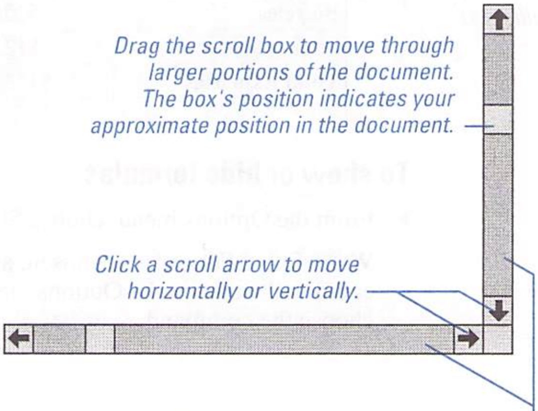
For a tutorial, press SHIFT+F1 and go to the "Working with windows" lesson in the Starting with computers section of the tutorial.

If a spreadsheet contains more information than Works can display in one window, you can scroll through the spreadsheet to view your work.

To move through a spreadsheet

▶ Use one of the following methods:

Scrolling with a mouse



Drag the scroll box to move through larger portions of the document. The box's position indicates your approximate position in the document.

Click a scroll arrow to move horizontally or vertically.

Click the scroll bar to move vertically or horizontally by one screen at a time.

Scrolling with the keyboard

To move	Press this key	Key name
Left one cell	←	LEFT ARROW
Right one cell	→	RIGHT ARROW
Up one row	↑	UP ARROW
Down one row	↓	DOWN ARROW
To first cell of current row	Home	HOME
To last column that contains data	End	END
To beginning of spreadsheet	Ctrl Home	CTRL+HOME
To the last row or column that contains data	Ctrl End	CTRL+END

Differences in keyboards
Some keyboards label keys differently from those shown on this chart. For example, CTRL may be CONTROL, PAGE UP and PAGE DOWN may be PG UP and PG DN.

Moving with the TAB key
You can use the TAB key to move from left to right, or SHIFT+TAB to move from right to left, one cell at a time.

To move	Press this key	Key name
Up one window	Page Up	PAGE UP
Down one window	Page Down	PAGE DOWN
Left one window	Ctrl Page Up	CTRL+PAGE UP
Right one window	Ctrl Page Down	CTRL+PAGE DOWN

To go directly to a cell or a range

For more information on cell or range references , see "Using cell and range references in a formula" on page 133.

1. Press F5.
2. In the Go To box, type the cell, range reference, or range name.
3. Choose the OK button.

Viewing the spreadsheet on the screen

You can control what you see on your screen with several options that Works provides. For example, you can:

- Use gridlines to show you where cell borders are.
- Freeze row and column titles on the screen so they stay in place while you scroll through your spreadsheet.
- Divide the spreadsheet window into separate sections so you can view different parts of a large spreadsheet simultaneously.

Using gridlines to show cell borders

When you create a new spreadsheet, Works displays gridlines to show you where the cell borders are.

To show or hide gridlines

▸ From the Options menu, choose Show Gridlines.

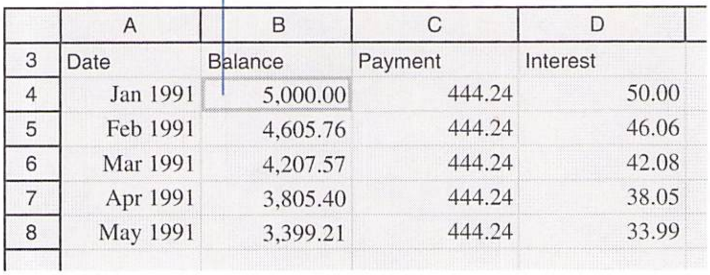
When Show Gridlines is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Gridlines, choose the command again.

Want gridlines to print?
If you want the gridlines to print when you print your spreadsheet, choose the Print Gridlines check box in the Page Setup & Margins dialog box.

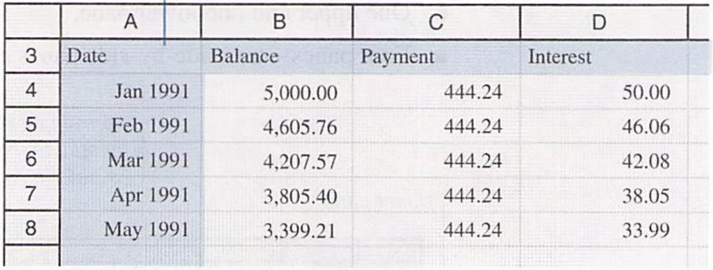
Keeping row and column titles on the screen

You can freeze column and row titles to keep them on the screen while you scroll through other parts of a spreadsheet or to print those column and row titles on every page of a multi-page spreadsheet. Freezing affects all rows above and to the left of the highlight.

To freeze row and column titles, first highlight the cell directly below and to the right of the titles you want to freeze.



	A	B	C	D
3	Date	Balance	Payment	Interest
4	Jan 1991	5,000.00	444.24	50.00
5	Feb 1991	4,605.76	444.24	46.06
6	Mar 1991	4,207.57	444.24	42.08
7	Apr 1991	3,805.40	444.24	38.05
8	May 1991	3,399.21	444.24	33.99



	A	B	C	D
3	Date	Balance	Payment	Interest
4	Jan 1991	5,000.00	444.24	50.00
5	Feb 1991	4,605.76	444.24	46.06
6	Mar 1991	4,207.57	444.24	42.08
7	Apr 1991	3,805.40	444.24	38.05
8	May 1991	3,399.21	444.24	33.99

When you choose Freeze Titles from the Options menu, the rows above Row 4 and to the left of Column B are frozen.

To freeze a row or column

Highlighting cells in frozen rows or columns
You cannot use the mouse or arrow keys to move the highlight into frozen rows or columns. You can, however, use the Go To command on the Select menu to highlight cells or ranges in frozen rows or columns.

1. Move the highlight to below the rows and to the right of the columns you want to freeze.

   Both the row and titles to the left and column titles to the right are frozen at the same time, as shown in the preceding illustration.

   To freeze only columns to the left of the highlight, move the highlight to row 1.

   To freeze only rows above the highlight, move the highlight to column A.

2. From the Options menu, choose Freeze Titles.

To unfreeze a row or column

▶ From the Options menu, choose Freeze Titles.

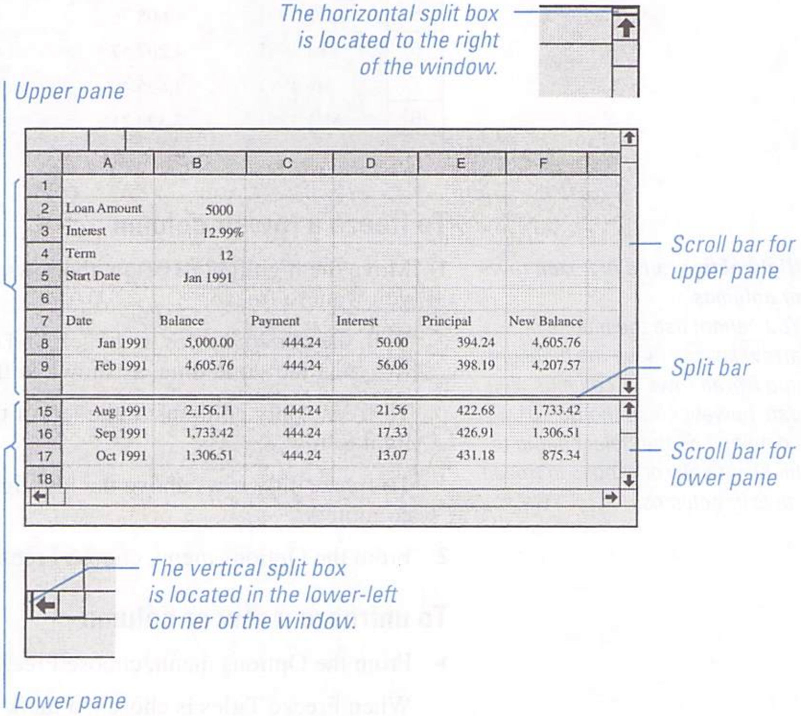
When Freeze Titles is chosen, a mark is displayed beside the command name on the Options menu. To turn off Freeze Titles, choose the command again.

Viewing separate parts of a spreadsheet at one time

When you're working on a large spreadsheet, you may find it helpful to view several parts of it on the screen at once. You can split a window into two or four areas called panes. You can view a different part of a spreadsheet in each pane.

You can divide a window in a number of ways. You can divide it into:

- Two side-by-side panes.
- One upper and one lower pane.
- Four panes—two side-by-side panes and upper and lower panes.


The horizontal split box is located to the right of the window.
Upper pane
Scroll bar for upper pane
Split bar
Scroll bar for lower pane
The vertical split box is located in the lower-left corner of the window.
Lower pane

	A	B	C	D	E	F
1						
2	Loan Amount	5000				
3	Interest	12.99%				
4	Term	12				
5	Start Date	Jan 1991				
6						
7	Date	Balance	Payment	Interest	Principal	New Balance
8	Jan 1991	5,000.00	444.24	50.00	394.24	4,605.76
9	Feb 1991	4,605.76	444.24	56.06	398.19	4,207.57
15	Aug 1991	2,156.11	444.24	21.56	422.68	1,733.42
16	Sep 1991	1,733.42	444.24	17.33	426.91	1,306.51
17	Oct 1991	1,306.51	444.24	13.07	431.18	875.34
18						

To quickly insert or move a split

▶ Drag the split box to where you want the split.

The split box is a thin bar at the top of the vertical scroll bar and on the left side of the horizontal scroll bar.

Pane sizes
The smallest upper (horizontal) pane size Works allows is two rows long. When you split a window, each pane must have at least two rows in order to show both the up and down scroll bar.

To quickly remove a split

▶ Double-click the split bar.

To insert, move, or remove a split

1 From the Window menu, choose Split.

If you do not already have separate panes, Works displays the horizontal and the vertical split bars in the document window.

If you already have separate panes, Works positions the split pointer at the intersection of the split bars.

2 Press the UP or DOWN and LEFT or RIGHT ARROW keys to move the split bars where you want them.

If you want to remove the horizontal split pane, move the bar to the very top or bottom of the document window.

If you want to remove the vertical split pane, move the bar to the far left or right of the document window.

3 Press ENTER.

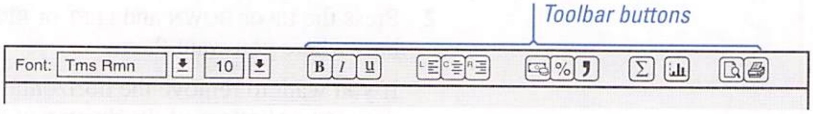
To move between panes

▶ To move the highlight cursor between panes, click in the pane you want.
–or–
Press F6 to move the highlight cursor to the next pane, or press SHIFT+F6 to move the highlight cursor to the previous pane.

Speeding up your work with the Toolbar

For a tutorial, press SHIFT+F1 and go to the "Formatting the spreadsheet" lesson in the Spreadsheet and Charting section for a tutorial.

When the Toolbar is displayed, it provides mouse users with shortcuts to many spreadsheet commands. Initially, Works displays the Toolbar when you create a new spreadsheet.



Before you can use any of the Toolbar buttons, you must first highlight the cell or group of cells you want to format. After you've highlighted them, you can choose from these buttons to make the following changes:

Choose	To	Choose	To
B	Make highlighted entry bold	$	Format cell as currency
I	Make highlighted entry italic	%	Format cell as percent
U	Underline highlighted entry	,	Format cell as comma
L≡	Left align a cell	Σ	Create Autosum
C≡	Center a cell	📊	Create new chart
R≡	Right align a cell	🔍	Display print preview
Tms Rmn ⬇	Choose font	🖶	Start printing
10 ⬇	Choose character size		

U.S. currency symbol

In the United States, the dollar sign is used as the currency symbol.

To hide or show the Toolbar

▶ From the Options menu, choose Show Toolbar.

When Show Toolbar is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Toolbar, choose the command again.

Changing text, values, or formulas

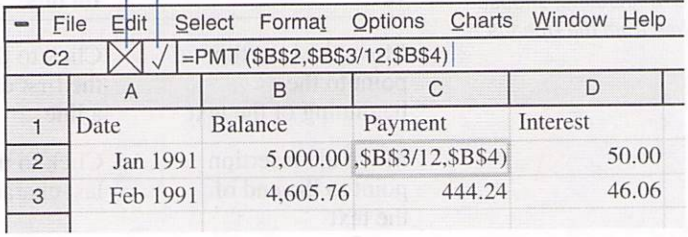
You can change a cell entry to correct a mistake or to update the information. You may want to clear the cell, type over information in a cell, or edit only part of the information in a cell.

Editing an entry in the formula bar does not affect the cell's formatting.

The Enter and Cancel buttons are displayed in the formula bar when the insertion point is in the formula bar.

Click the Cancel button to cancel your entry.

Click the Enter button to comfirm your entry.



=PMT ($B$2,$B$3/12,$B$4)

	A	B	C	D
1	Date	Balance	Payment	Interest
2	Jan 1991	5,000.00	,$B$3/12,$B$4)	50.00
3	Feb 1991	4,605.76	444.24	46.06

Clearing a cell or typing over an entry removes the contents, but leaves the formatting and font styles. If you type in new data after clearing a cell, the new entries will have the same styles and alignments as the old entries.

To clear the contents of a cell

Want to cancel the deletion you just made?
To cancel the deletion, press ESC before you press ENTER or move the highlight.

1 Highlight the cell you want to clear.

When you highlight a cell, the contents of the cell are displayed in both the cell and in the formula bar.

2 Press DEL.

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

The cell is cleared, and you can type a new entry.

To type over a cell entry

1 Highlight the cell you want to change.

2 Type the new cell entry.

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

To change an entry

1 Highlight the cell you want to edit.

2 Click in the formula bar to move the insertion point into the formula bar.
–or–
Press F2.

3 Use the information in the table after step 4 to move the insertion point, highlight characters, and delete characters the formula bar.

4 Click the Enter box in the formula bar.
–or–
Press ENTER.

To	Do this	Or press
Move the insertion point to the beginning of the text	Click to the left of the first character in a line	Home
Move the insertion point to the end of the text	Click to the right of the last character in a line	End
Move the insertion point left one character	Click one character to the left	←
Move the insertion point right one character	Click one character to the right	→
Move the insertion point anywhere in the formula bar	Click the formula bar where you want the insertion point	← or →
Highlight one or more characters	Drag the mouse pointer over the characters	⇧Shift + ← ⇧Shift + →
Delete highlighted characters		Del

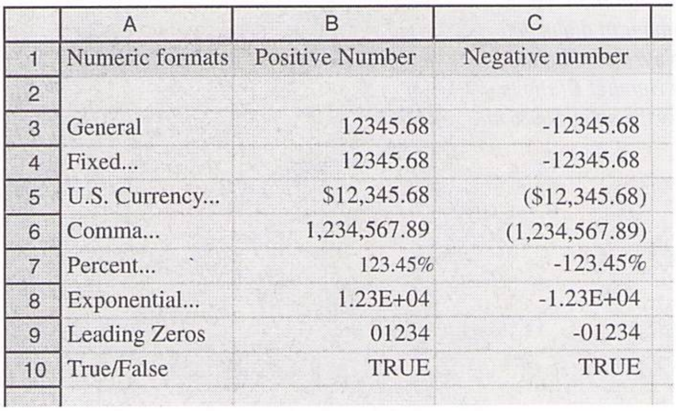
Manually calculating when you're making multiple changes
Whenever you change a value or formula in a spreadsheet, Works recalculates the spreadsheet. Most of the time the recalculation seems to be instantaneous. If you're making multiple changes and want Works to wait to recalculate, choose the Manual Calculation command from the Options menu. When you're ready for Works to recalculate, choose Calculate Now from the Options menu.

Changing number formats

For a tutorial, press SHIFT+F1 and go to the "Formatting the spreadsheet" lesson in the Spreadsheet and Charting section of the tutorial.

You can change the way a cell displays a number by formatting the cell before or after you enter a number into it. If you're going to use the same format for several different entries, you may find it easier to do the formatting after you've made your entries.

This example shows how each format option displays numbers.



	A	B	C
1	Numeric formats	Positive Number	Negative number
2			
3	General	12345.68	-12345.68
4	Fixed...	12345.68	-12345.68
5	U.S. Currency...	$12,345.68	($12,345.68)
6	Comma...	1,234,567.89	(1,234,567.89)
7	Percent...	123.45%	-123.45%
8	Exponential...	1.23E+04	-1.23E+04
9	Leading Zeros	01234	-01234
10	True/False	TRUE	TRUE

When you change the format of a number in a cell, its underlying value does not change. Formatting affects only the way information appears in the cell. To see the underlying number in a particular cell, highlight it and then look in the formula bar.

To quickly format percent, currency, or commas

Just type it

You can format a cell to have the currency or percent format by simply typing the format as you enter the value. For example, to format a cell as dollar currency, type ***$54.00*** *rather than 54.*

1 Highlight each cell you want to format.

2 On the Toolbar, click the button for the number format you want:

To format a cell	Click	Press these keys
As currency	💵	CTRL+4
As percent	%	CTRL+5
With commas every 3 digits	,	CTRL+COMMA

To change a number format

1 Highlight the cell or cells you want to change.

2 From the Format menu, choose the format you want.

3 If a dialog box is displayed, type the number of decimals or digits you want.

4 Choose the OK button.

A leading zeros example

When you format a number with the leading zeros format, you must tell Works the total number of digits you want it to display. For example, to enter 936 as a number with two leading zeros, choose Leading Zeros from the Format menu, and then type **5** *(the total number of digits you want to display, including the zeros) in the Number Of Digits box. Works will display 00936 in the cell.*

Copying and moving cell contents

For a tutorial, press SHIFT+F1 and go to the "Copying and moving cell contents" lesson in the Spreadsheet and Charting section for a tutorial.

You can avoid repetitive typing and ensure accuracy as you enter information into cells by using the copy commands. For example, you can:

- Copy the contents of a cell or group of cells to a new location within the same or a different spreadsheet.
- Move the contents of a cell or group of cells within a spreadsheet or to another spreadsheet.
- Copy information into groups of adjacent cells below or to the right of a cell or group of cells.
- Copy the results of formulas, but not the formulas themselves, to the same or different spreadsheet.

To copy the contents of a cell or group of cells

Another way to copy
You can also type the same data into many cells at the same time by highlighting the group of cells in which you want the same data, typing the information, and then holding down CTRL while pressing ENTER.

1. Highlight each cell you want to copy.
2. From the Edit menu, choose Copy.
   –or–
   Press CTRL+INS.

   To copy to another spreadsheet, open the spreadsheet or switch to it.
3. Highlight the cell or the upper-left corner of the group of cells into which you want to place the copy.
4. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.

To move the contents of a cell or group of cells

1. Highlight each cell you want to move.
2. From the Edit menu, choose Cut.
   –or–
   Press DEL.

   To move cell contents to another spreadsheet, switch to or open the spreadsheet.
3. Highlight the cell or the upper-left corner of the group of cells into which you want to move the contents.
4. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.

To immediately repeat a copy or move

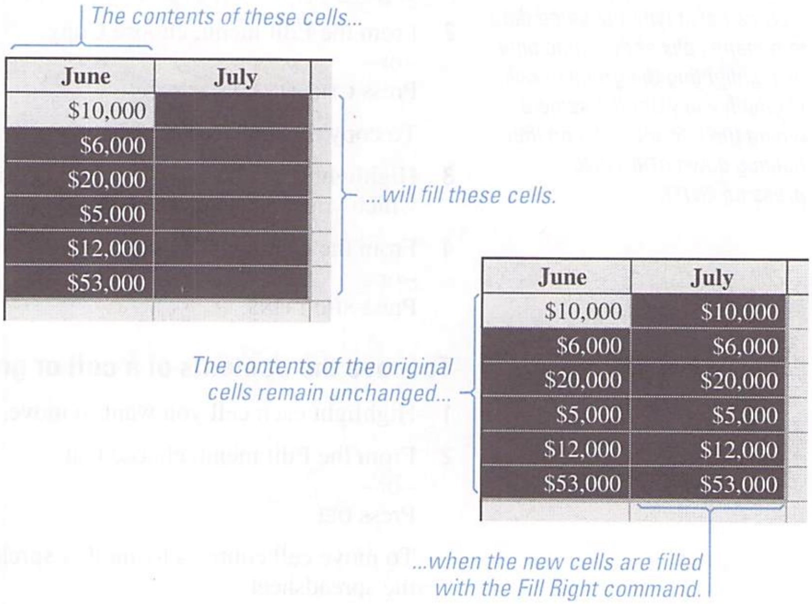
1. Highlight the cell, or the upper-left corner of the group of cells, into which you want to place the next copy.
2. From the Edit menu, choose Paste.
   –or–
   Press SHIFT+INS.

To copy into adjacent cells

Copying over existing information
When you copy into cells that already contain entries, Works replaces those entries with the new information. If you don't want to delete your existing entries, insert blank rows or columns where you want to place the copies.

Copying to large groups of cells
When you use the Fill Right and Fill Down commands to copy into adjacent cells, you can copy into many cells at once. For example, you can copy the contents of a single column into five adjacent columns, all at one time.

1. Highlight the cell, column, or row that contains the information you want to copy.
2. Extend the highlight to the right or down to include the cells into which you want the copies to be placed.
3. From the Edit menu, choose Fill Right.
   –or–
   From the Edit menu, choose Fill Down.



The contents of these cells...

June	July
$10,000	
$6,000	
$20,000	
$5,000	
$12,000	
$53,000	

...will fill these cells.

June	July
$10,000	$10,000
$6,000	$6,000
$20,000	$20,000
$5,000	$5,000
$12,000	$12,000
$53,000	$53,000

The contents of the original cells remain unchanged...

...when the new cells are filled with the Fill Right command.

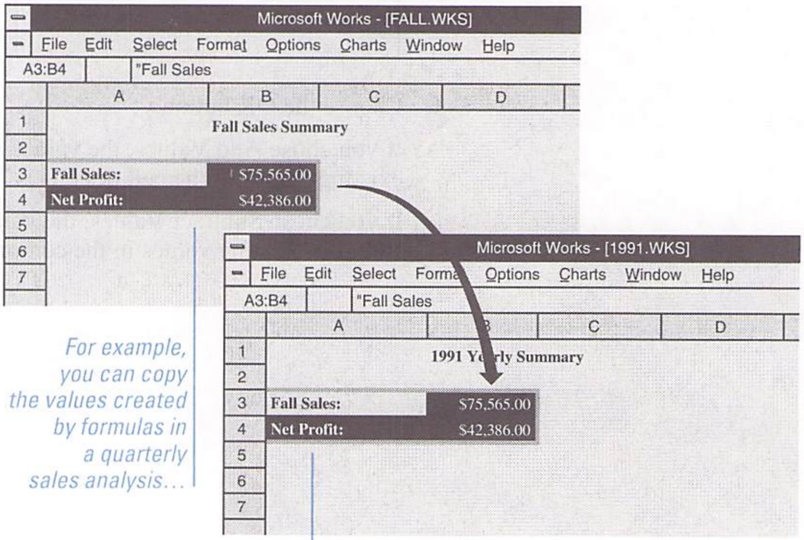
Copying, adding, and subtracting values

Sometimes, when you are summarizing information in a large spreadsheet or consolidating information for several spreadsheets into a single spreadsheet, you will want to paste just the resulting value of a formula but not the formula itself, since the formula may produce a different value in a new spreadsheet.

With the Paste Special command on the Edit menu, you can:

- Paste just the resulting value of a formula but not the formula itself, to a new location within a spreadsheet or to a new spreadsheet.
- Add a copied value to an existing value.
- Subtract a copied value from an existing value.

With the Paste Special commands, you can copy the results and formulas, but not the formulas themselves, to the same spreadsheet or a different one.

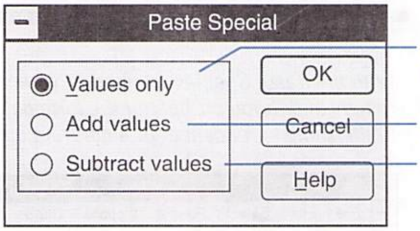

Microsoft Works - [FALL.WKS]
File Edit Select Format Options Charts Window Help
A3:B4
"Fall Sales
A B C D
Fall Sales Summary
Fall Sales: $75,565.00
Net Profit: $42,386.00
Microsoft Works - [1991.WKS]
File Edit Select Format Options Charts Window Help
A3:B4
"Fall Sales
A B C D
1991 Yearly Summary
Fall Sales: $75,565.00
Net Profit: $42,386.00

For example, you can copy the values created by formulas in a quarterly sales analysis…

…to a new spreadsheet that summarizes the entire year. You don't want to copy the formulas because they may produce different values in a different spreadsheet.

To paste, add, or subtract values only

1. Highlight the cell or group of cells you want to copy to another location.
2. From the Edit menu, choose Copy.
3. Highlight the cell or the upper-left corner of the group of cells into which you want to place the copy.
4. From the Edit menu, choose Paste Special.
5. In the dialog box, choose either the Values Only, Add Values, or Subtract Values option button.



Copies the values only, not the formulas that created those values

Adds values only

Subtracts values only

6. Choose the OK button.

   If you chose Add Values, the values you copied are added to the existing values in the cell or cells.

   If you chose Subtract Values, the values you copied are subtracted from the existing values in the cell or cells.

Changing the appearance of a spreadsheet

You can make changes to a spreadsheet to help organize its contents and make it easier for you and others to read. You can:

- Change the width of cells to accommodate column and row heading titles as well as entries of different length.
- Change the way entries are aligned.
- Insert or delete whole rows or columns.

Improving ease of reading
You can also make your spreadsheet easier to read by changing the font or font size, by using the bold, italic, and underline font styles, and by adding cell borders. For more information, see "Using fonts, font styles, and cell borders for emphasis" on page 126.

Changing cell width

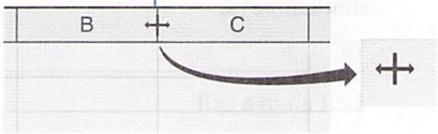
The width of the column determines how many characters fit inside a cell. When you create a spreadsheet, Works presets columns to be 10 characters wide. If you enter text that is wider than a column's width, the excess text is displayed in the cells to the right, if those cells are empty. If the cells to the right are not empty, Works displays and prints only the text that fits in the cell. However, the complete text or value that you typed (up to 255 characters) is displayed in the formula bar when you highlight a cell.

To quickly change the width of a column

▶ Drag the column border to a new position.

When Works displays ##### in a cell
Works displays ##### in the cell if a formatted number or date exceeds its cell width. If the number is in general format, Works puts it in scientific notation. Works also displays ##### if the value you type is outside preset limits (you can't format a negative number as a date or time, for example).

When you position the mouse pointer over a border, it changes shape to indicate that you can now drag the border and change the width.



To set a precise column width

1 Highlight any cell in the column you want to widen.

2 From the Format menu, choose Column Width.

3 In the Width box, type a number between 0 (zero) and 79.

If you type 0 (zero) as the column width, the column is hidden but the values or formulas it contains continue to calculate.

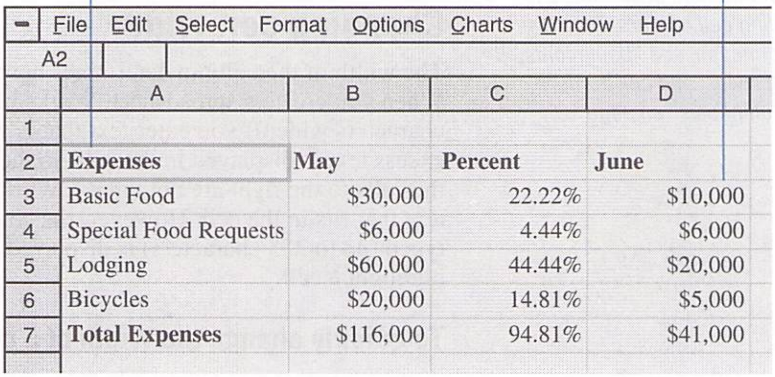
4 Choose the OK button.

Changing cell alignment

You can also control how text or numbers are positioned, or aligned, within the cell. When you create a spreadsheet, all cells are in general alignment, with text left-aligned and numbers right-aligned, but you can change the alignment of any cell at any time, before or after you enter the information. In addition to aligning cell entries to the left or right, you can also center them within the cell.

Works automatically aligns text to the left...

...and numbers to the right.



	A	B	C	D
1				
2	**Expenses**	**May**	**Percent**	**June**
3	Basic Food	$30,000	22.22%	$10,000
4	Special Food Requests	$6,000	4.44%	$6,000
5	Lodging	$60,000	44.44%	$20,000
6	Bicycles	$20,000	14.81%	$5,000
7	**Total Expenses**	$116,000	94.81%	$41,000

To quickly change the alignment of cell contents

1 Highlight each cell you want to change.

2 On the Toolbar, choose from the following Toolbar buttons; or press shortcut keys.

To	**Click**	**Press these keys**
Left align a cell	L	CTRL+L
Right align a cell	R	CTRL+R
Center a cell	C	CTRL+E

To change both the alignment and style of entries

1 Highlight each cell you want to change.

2 From the Format menu, choose Style.

3 Under Alignment, choose the option you want.

4 Under Styles, choose the options you want.

5 Choose the OK button.

Inserting and deleting rows and columns

For a tutorial, press SHIFT+F1 and go to the "Changing your spreadsheet" lesson in the Spreadsheet and Charting section of the tutorial.

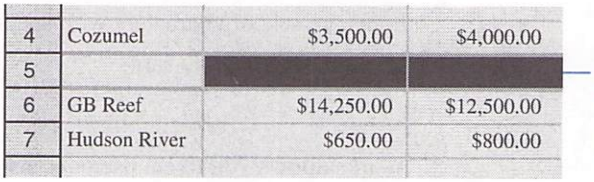
You can insert rows or columns in your spreadsheet if you've forgotten something or you need to add information. You can also insert blank rows and columns to help showcase certain portions of your spreadsheet. And, if necessary, you can delete columns or rows that contain information you no longer need.

To insert one or more rows or columns

Highlighting an entire row or column
Click the row number to highlight an entire row.
Click the column label to highlight an entire column.

1 Highlight the entire row or the column where you want to insert the new row or column.

You can insert more than one row or column at the same time: highlight as may rows or columns as you want to insert.



4	Cozumel	$3,500.00	$4,000.00
5			
6	GB Reef	$14,250.00	$12,500.00
7	Hudson River	$650.00	$800.00

Works inserts the row or column, and readjusts the spreadsheet.

2 From the Edit menu, choose Insert Row/Column.

If you don't highlight an entire row or column before choosing Insert Row/Column, Works displays a dialog box in which you must specify whether you are inserting a row or column, and then choose the OK button.

To delete one or more rows or columns

1 Highlight one or more cells in each column or row that you want to delete.

2 From the Edit menu, choose Delete Row/Column.

If you don't highlight an entire row or column before choosing Delete Row/Column, Works displays a dialog box in which you must specify whether you are deleting a row or column, and then choose the OK button.

Using fonts, font styles, and cell borders for emphasis

For a tutorial, press SHIFT+F1 and go to the "Formatting a spreadsheet" lesson in the Spreadsheet and Charting section for a tutorial.

Works offers several options that allow you to emphasize certain elements of your spreadsheet. For example, you can:

- Change fonts, font sizes, and font styles to make the spreadsheet easier to read or to fit more on a page.
- Add cell borders to make it easier to see the structure of the spreadsheet.

Changing fonts and font styles

Fonts can add emphasis to your printed spreadsheets, and, with a smaller font size, you can print more data on each page.

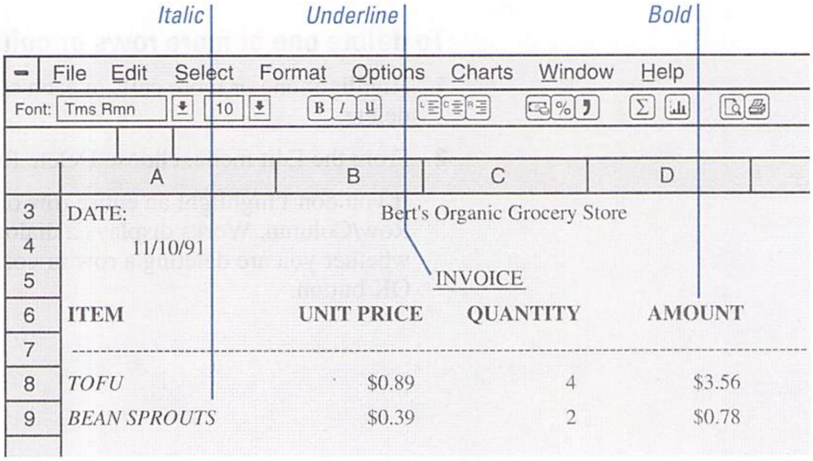
Fonts are sets of characters with specific designs. For example:

This text is Helv font.

`This text is Courier font.`

Works allows you to choose only a single font and font size for your entire spreadsheet.

Font styles determine the appearance of text and numbers. You can format spreadsheet entries to be bold, underlined, and italic. You can use these styles to make headings stand out and to draw attention to important figures.

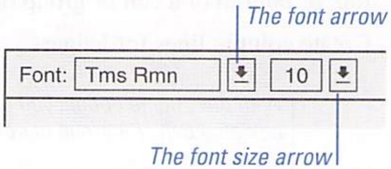


	A	B	C	D
3	DATE:	Bert's Organic Grocery Store		
4	11/10/91			
5			<u>INVOICE</u>	
6	**ITEM**	**UNIT PRICE**	**QUANTITY**	**AMOUNT**
7	------------------------	------------------------	------------------------	------------------------
8	*TOFU*	$0.89	4	$3.56
9	*BEAN SPROUTS*	$0.39	2	$0.78

To quickly change fonts

1 On the Toolbar, click the Font box arrow.
–or–
Press CTRL+F to display the list of fonts.

2 From the list of fonts, choose the name of the font you want.



The font arrow

The font size arrow

Your printer determines fonts
The fonts Works displays in the Font box on the Toolbar are determined by your active printer. Works displays only the fonts your printer can print. For information on printers and fonts in Windows, see your Windows documentation.

Your change affects the entire spreadsheet
When you change fonts and font sizes, your change affects the entire spreadsheet.

To quickly change font size

1 On the Toolbar, click the Font Size box arrow.
–or–
Press CTRL+Z to display the list of font sizes.

2 From the list of font sizes, choose the size you want.

To change fonts and font size at the same time

1 From the Format menu, choose Font.

2 In the Font and Size boxes, choose the options you want.

3 Choose the OK button.

When you change fonts and font sizes, your change affects the entire spreadsheet.

To quickly make text bold, italic, or underlined

1 Highlight each entry you want to make bold, italic, or underlined.

2 Choose from the following Toolbar buttons or shortcut keys:

To	Click, or	Press these keys
Make an entry bold	B	CTRL + B
Make an entry italic	I	CTRL + I
Underline an entry	u	CTRL + U
Return to plain text		CTRL + SPACEBAR

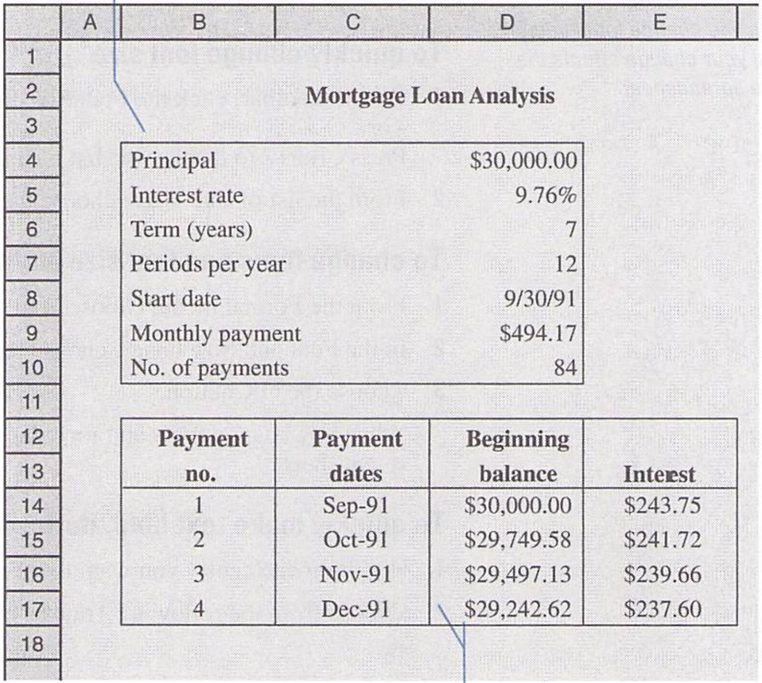
Adding cell borders

For a tutorial, press SHIFT+F1 and go to the "Formatting the spreadsheet" lesson in the Spreadsheet and Charting section of the tutorial.

Cell borders are useful for emphasizing key information and making a spreadsheet easier to read. With Works, you can:

- Enclose cells or a group of cells in a box outline.
- Add any combination of horizontal and vertical lines on the left, right, top, or bottom of a cell or group of cells.
- Create column lines for ledgers.

With the Outline option, you can box off a cell or a group of cells.



	A	B	C	D	E
1					
2			**Mortgage Loan Analysis**		
3					
4		Principal		$30,000.00	
5		Interest rate		9.76%	
6		Term (years)		7	
7		Periods per year		12	
8		Start date		9/30/91	
9		Monthly payment		$494.17	
10		No. of payments		84	
11					
12		**Payment**	**Payment**	**Beginning**	
13		**no.**	**dates**	**balance**	**Interest**
14		1	Sep-91	$30,000.00	$243.75
15		2	Oct-91	$29,749.58	$241.72
16		3	Nov-91	$29,497.13	$239.66
17		4	Dec-91	$29,242.62	$237.60
18					

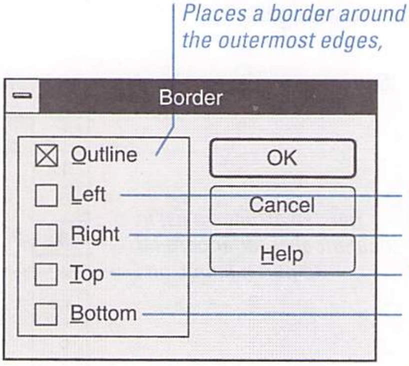
With the Top, Bottom, Left, and Right options, draw horizontal and vertical lines.

To add cell borders for emphasis

Seeing borders by hiding gridlines

Gridlines and cell borders are not the same thing. You can see the cell borders you add more clearly if you turn off the Show Gridlines command by choosing it from the Options menu. The cell borders also show clearly in print preview.

1. Highlight each cell you want to format with borders.
2. From the Format menu, choose Border.
3. Choose from the following:



☒ Outline — *Places a border around the outermost edges,*

☐ Left — *the left edge,*

☐ Right — *the right edge,*

☐ Top — *the top edge,*

☐ Bottom — *or the bottom edge of the cells you highlighted.*

4. Choose the OK button.

   Works adds borders to the selection.

To remove cell borders

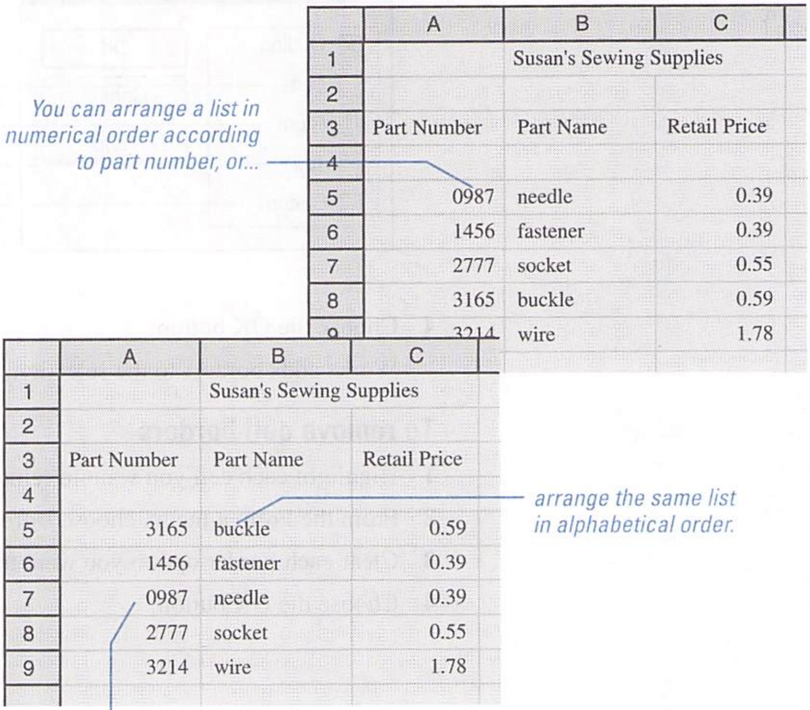
1. Highlight each cell you want to remove borders from.
2. From the Format menu, choose Border.
3. Clear each border option you want to remove.
4. Choose the OK button.

Organizing cell entries in alphabetical or numerical order

For a tutorial, press SHIFT+F1 and go to the "Changing your spreadsheet" lesson in the Spreadsheet and Charting section of the tutorial.

You can type entries in any order and then let Works arrange them alphabetically or numerically. When Works sorts information, it sorts by rows, which means that entire rows, and not just the highlighted entries, are rearranged.

Sorting lets you organize data in several different ways.



You can arrange a list in numerical order according to part number, or...

	A	B	C
1		Susan's Sewing Supplies	
2			
3	Part Number	Part Name	Retail Price
4			
5	0987	needle	0.39
6	1456	fastener	0.39
7	2777	socket	0.55
8	3165	buckle	0.59
9	3214	wire	1.78

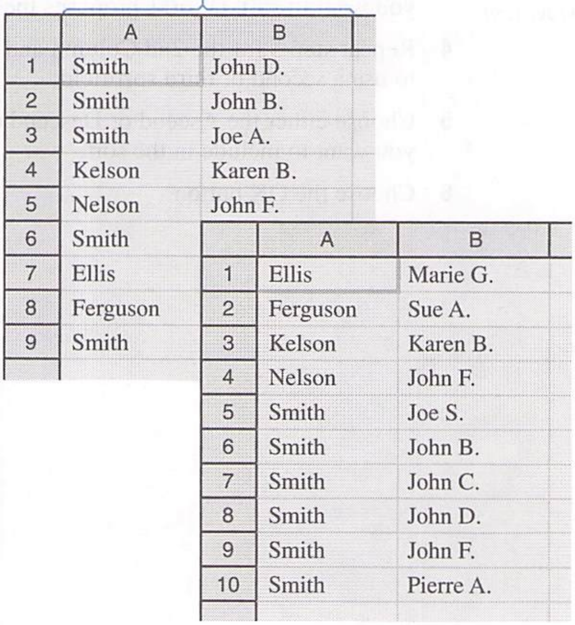
arrange the same list in alphabetical order.

	A	B	C
1		Susan's Sewing Supplies	
2			
3	Part Number	Part Name	Retail Price
4			
5	3165	buckle	0.59
6	1456	fastener	0.39
7	0987	needle	0.39
8	2777	socket	0.55
9	3214	wire	1.78

Be sure to format numbers that begin with zeros with the Leading Zeros format from the Format menu. Otherwise, Works deletes the zeros.

Works can sort on one, two, or three columns at a time. When you specify columns to be sorted, specify the most important column first. In the following example , column A, which contains the last names of a group of people, should be sorted first. During the same sort, you must specify column B, the column that contains first names and middle initials, as the second column to be sorted. Works will alphabetize the list; first, according to the contents of column A, and then, if there are duplicates, based on the contents of column B.

Two columns of names; before you tell Works to do a multiple-row sort...



	A	B
1	Smith	John D.
2	Smith	John B.
3	Smith	Joe A.
4	Kelson	Karen B.
5	Nelson	John F.
6	Smith	
7	Ellis	
8	Ferguson	
9	Smith	

	A	B
1	Ellis	Marie G.
2	Ferguson	Sue A.
3	Kelson	Karen B.
4	Nelson	John F.
5	Smith	Joe S.
6	Smith	John B.
7	Smith	John C.
8	Smith	John D.
9	Smith	John F.
10	Smith	Pierre A.

...and after Works sorts the list based first on the contents of column A and then, if there are duplicates, on column B.

If the selection you are sorting contains a mixture of numbers, text, times, and dates, Works groups all text, dates, times, and numbers during the sort. In an ascending sort, they are grouped in this order: text, times, numbers, dates. In a descending sort, they are grouped in the opposite order: dates, numbers, times, text. In both ascending and descending sorts, Works places blank cells after all other sorted entries.

After sorting, Works adjusts relative references, but not absolute references. For more information about absolute and relative references, see "Using relative references for cells and ranges" and "Using absolute references for cells and ranges" on page 136.

To sort rows in alphabetical or numerical order

Highlighting the entire spreadsheet
To highlight the entire spreadsheet, click the rectangular box to the left of column A and just above row 1, or press CTRL+SHIFT+F8.

1 Highlight the rows you want to sort. To sort the entire spreadsheet, you must first highlight it.

2 From the Select menu, choose Sort Rows.

3 In the 1st Column box, type a letter that corresponds to the column you want to sort. (Works proposes the first column in your selection.)

4 Repeat step 3 for the 2nd Column and 3rd Column boxes if you want to use a second or third sort field.

5 Choose either the Ascend or Descend option button for each column you want to include in the sort.

6 Choose the OK button.

Using cell and range references in a formula

For a tutorial, press SHIFT+F1 and go to the "Adding formulas and functions" lesson in the Spreadsheet and Charting tutorial.

For more detailed examples of using cell and range references in a formula, see "Naming groups of cells for references and calculations" on page 139.

One advantage of using the Works Spreadsheet is that you can use cell and range references to represent actual numbers. The advantage is that if you change the value in any cell referenced by a formula, the formula is automatically recalculated and the cell containing the formula is updated to reflect the new result.

A cell reference identifies a cell by using the cell's column letter and row number. For example, cell A10 is located at the intersection of column A and row 10. When you highlight a cell, Works displays the cell's reference in the reference area on the left side of the formula bar.

A range reference identifies a group of cells. It uses the cell references of the cells in the upper-left and lower-right corners of the range, separated by a colon, to describe the range. For example, the range reference A1:A4 includes cells A1, A2, A3, and A4.

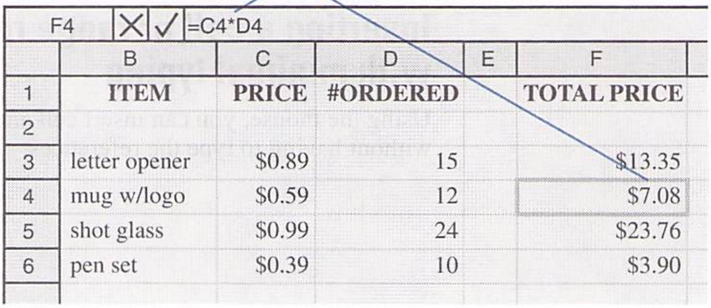
The following examples illustrate formulas that use cell references to create values:

Using cell references in a formula In this invoice spreadsheet, cell C4 contains the individual unit price of a coffee mug and cell D4 contains the number of mugs you ordered. You can calculate the total price of the coffee mugs by entering the following formula in cell F4:

=C4*D4

After you've entered the formula, your spreadsheet would look something like this:

*The formula =C4*D4 multiplies the values in cell C4 by the values in cell D4. If you change the value in either cell, Works automatically recalculates the formula.*



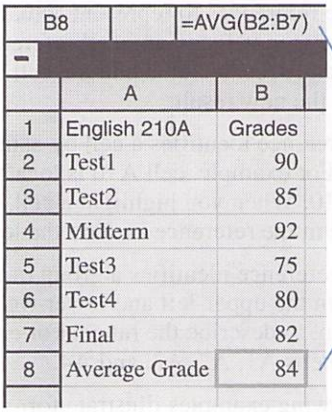
F4 =C4*D4

	B	C	D	E	F
1	ITEM	PRICE	#ORDERED		TOTAL PRICE
2					
3	letter opener	$0.89	15		$13.35
4	mug w/logo	$0.59	12		$7.08
5	shot glass	$0.99	24		$23.76
6	pen set	$0.39	10		$3.90

For example, if you change the value in cell D4 to 10, Works automatically changes the value in cell F4.

For more information on the Works functions, see "Using operators and functions in formulas" on page 105, and Appendix A: Spreadsheet and Database functions on page 371.

Using range references in a formula Range references are especially useful in formulas that use a group of cells in a calculation. In this example, Works uses a range reference and the AVG function to calculate a student's average grade:



B8 =AVG(B2:B7)

	A	B
1	English 210A	Grades
2	Test1	90
3	Test2	85
4	Midterm	92
5	Test3	75
6	Test4	80
7	Final	82
8	Average Grade	84

In this formula, Works averages all of the values in the cell range B2:B7, cells B2, B3, B4, B5, B6, and B7.

If you change any of the values in those cells, Works will recalculate the average.

To enter a cell reference in a formula

1. Highlight the cell in which you want to type the formula.
2. Type = (equal sign), followed by the cell reference you want.
3. Type the rest of the formula.

   Example: Type **=a1+b12**
4. Click the Enter box in the formula bar.

   –or–

   Press ENTER.

   Works displays the result of the formula in the cell, while the formula that created it is displayed in the formula bar.

Inserting a cell or range reference into a formula with minimal typing

Using the mouse, you can insert cell and range references into formulas without having to type the references.

To insert a cell reference in a formula with minimal typing

1 Highlight the cell in which you want to type the formula.

2 Type the formula up to the point where you want to insert a cell reference.

Example: type **=12***

3 Click the cell whose cell reference you want to include in the formula.

Example: Click cell A12.

=12*A12 is displayed in the formula bar.

4 If necessary, type the rest of the formula repeating steps 2 and 3 to insert other references.

5 Click the Enter box in the formula bar.
–or–
Press ENTER.

Works displays the values created by the formula in the cell, while the formula that created it is displayed in the formula bar.

To insert a range reference in a formula with minimal typing

Formulas with functions need parentheses
When you use a function in a formula, be sure to enclose the values or references you want the formula to evaluate in parentheses. Otherwise, Works may display an error message.

1 Highlight the cell in which you want to type the formula.

2 Type the formula up to the point where you want to insert the range reference.

Example: Type =SUM(

3 Drag to extend the highlight over the range you want to insert in the formula.

Works inserts the reference of the first cell, a colon (:), then the cell reference of the last cell in the range you want to include in the formula.

The formula now looks like this: =SUM(D1:D4.

4 Type a closing parenthesis to complete the range reference.

Example: Type)

The formula now looks like this: =SUM(D1:D4).

5 Click the Enter box in the formula bar.
–or–
Press ENTER.

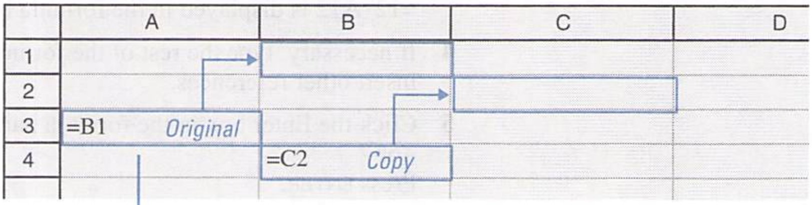
Works displays the value created by the formula in the cell, while the formula that created it is displayed in the formula bar.

Using relative references for cells and ranges

For a tutorial, press SHIFT+F1 and go to the "Copying and moving cell contents" lesson in the Spreadsheet and Charting section of the tutorial.

Most cell and range references in a spreadsheet are relative references. A relative reference is like saying, "Go up two blocks and over one."

For example, if you type the formula **=B1** in cell A3, the cell reference points to a cell two rows up and one column to the right. If you copy this formula to cell B4, Works still looks for a value in the cell that is two rows up and one column to the right—cell C2. Works adjusts the formula to fit the location; the formula changes to =C2.



If you copy a relative reference to another cell, the reference changes in relation to its new location. Here, the reference points two rows up and one column to the right.

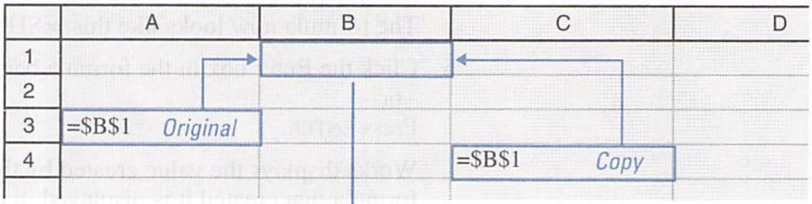
You use relative references if you always want to refer to cells relative to the cell containing the formula, even if you copy or move the formula.

Using absolute references for cells and ranges

For a tutorial, press SHIFT+F1, and go to the "Copying cells" lesson in the Spreadsheet and Charting section for a tutorial.

An absolute reference is like a mailing address. It describes one specific location in a spreadsheet. You use absolute references when you copy information and you do not want the cell or range reference to be changed even though its location has changed.

You make a reference absolute by inserting a dollar sign ($) in front of the cell reference, (the cell's column name and row number). For example, an absolute reference to cell B1, ($B$1), always points to cell B1 even if the formula containing the reference is copied to another location in the spreadsheet.



An absolute reference always refers to the same cell, no matter where you copy it.

Using mixed references for cells and ranges

If you want to refer to cells so that only the column or only the row reference is absolute, use mixed references. Then, if you copy the cell that contains the reference, only the relative row reference or column reference would change, but not both. For example, in the reference $A2, only the column reference is absolute.

After inserting a reference

Press F4 to cycle through the four reference types:

- *$A$2*
- *A$2*
- *$A2*
- *A2*

You can either type the mixed reference or use the F4 key to insert the dollar signs for you after you enter the formula into a cell. When you insert a reference into a formula by highlighting the cell or range you want to refer to, it is a relative reference. Immediately after inserting the reference, you can change the reference type to absolute or mixed using the F4 key. The F4 key cycles through the different combinations of mixed references, starting with the current reference (see the following procedure “To quickly insert an absolute or mixed reference”).

When you copy a mixed reference, the absolute portion remains fixed and the relative portion adjusts to the cell’s new location.

You can also mix range references. For example, $A$1:B2 describes a range with an absolute cell reference in the upper-left corner ($A$1) and a relative cell reference in the lower-right corner.

To quickly insert an absolute or mixed reference

1. Highlight the cell into which you want to type the formula.
2. Type your formula up to the point where you want to insert a reference.

   Example: Type **=AVG(**
3. Highlight the cell or range you want in the formula.

   Example: Highlight cells A2 through A8.

   Works inserts the cell reference or range reference into the formula for you. Your formula look like this: =AVG(CA2:A8.
4. Press F4 until you see the reference type you want displayed in the formula bar:

Reference	**Example**
Absolute column, absolute row	$A$2
Relative column, absolute row	A$2
Absolute column, relative row	$A2
Relative column, relative row	A2

When can you use the F4 shortcut key?

You can change a cell reference type with the F4 key only immediately after you insert a reference by clicking the cell or dragging over a range.

5 Type the rest of the formula.

Example: Type) to end the formula.

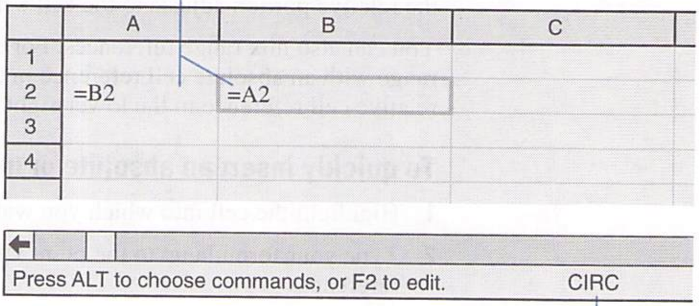
Your formula now looks like this: =AVG($A$2:$A$8).

6 Click the Enter box in the formula bar.
–or–
Press ENTER.

Correcting circular references

A circular reference is an error that results when a formula refers to itself, as shown in the following illustration. To correct a circular reference, change one of the formulas.

The formulas in these two cells refer to each other. Therefore, the formula has no beginning value from which to calculate.



Press ALT to choose commands, or F2 to edit. CIRC

CIRC is displayed in the status line when Works finds a circular reference.

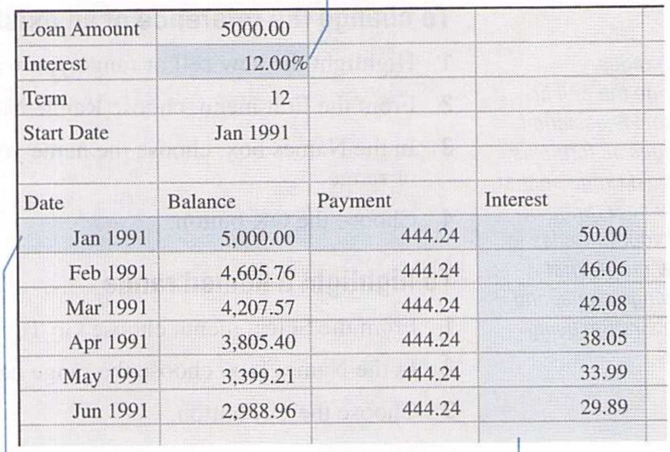
Naming groups of cells for references and calculations

In addition to using cell and range references to streamline your calculations, you can also name cells or range references and use those names in formulas.

After you define and name a cell or a range, you can:

- Use the name to search quickly for a particular section of the spreadsheet.
- Reference the cell or the range in a formula or chart.
- Use a range name to locate the range for copying, moving, formatting, clearing, or printing.
- Use the range name in a formula. Range names are often easier to remember when typing formulas than cell and range references.

You can name this cell "Interest Rate" and use the name in formulas or to locate the cell.



Loan Amount	5000.00		
Interest	12.00%		
Term	12		
Start Date	Jan 1991		
Date	Balance	Payment	Interest
Jan 1991	5,000.00	444.24	50.00
Feb 1991	4,605.76	444.24	46.06
Mar 1991	4,207.57	444.24	42.08
Apr 1991	3,805.40	444.24	38.05
May 1991	3,399.21	444.24	33.99
Jun 1991	2,988.96	444.24	29.89

You can name this row "January summary" and use the name to locate the row.

You can name this column "Interest charges" and use the name in formulas or to locate the column.

To name a cell or range

1. Highlight the cell or range you want to name.
2. From the Edit menu, choose Range Name.

   If there is text in the highlighted cell or range, or above or to the left of the highlighted cell or range, Works suggests that text for the name of the highlighted cell or range.
3. Accept the name Works suggests or type a name of up to 15 characters in the Name box.
4. Choose the OK button.

To delete a named range

1. From the Edit menu, choose Range Name.
2. In the Names box, choose the range name you want to delete.
3. Choose the Delete button.
4. Repeat steps 2 and 3 to delete other range names.
5. Choose the Close button.

To change the reference of an existing range name

What Works changes
When you change the cell or range that a name is assigned to, Works changes all formulas referring to the old range so that they refer to the new range. If you don't want your formulas to refer to the new range, first delete the old range name, and then name a new range using the same name.

1. Highlight the new cell or range you want the range name to refer to.
2. From the Edit menu, choose Range Name.
3. In the Names box, choose the name you want to assign to the new cell or range.
4. Choose the OK button.

To highlight a named range

1. From the Select menu, choose Go To.
2. In the Names box, choose the range name you want to go to.
3. Choose the OK button.

Using range names in a formula

Works also offers the option of using range names in a formula, which makes it easy for you to update your calculations and to avoid repeatedly typing new values into numerous cells.

Example 1: In a personal finances spreadsheet, you name the cell that contains your monthly house payment "House" and then use the name in a formula. The formula calculates your total yearly house payment.

=house*12

Example 2: In a spreadsheet that keeps track of your checking account, you can name the range that contains the record of your deposits "Deposits" and then use the range name in a formula. The formula

=SUM(Deposits)

totals your deposits and then displays the sum in the cell in which you typed the formula.

To insert a range name into a formula

What happens to formulas when you delete a range name?
When you delete a range name, Works changes any references to that range name to a range reference.

1 Type the formula up to the point where you want to insert the range name.

Example: Type **=37+**

2 Type the name of the range you are referencing.

Example: Type **sales**

Your formula now looks like this: =37+sales.

3 Type the rest of the formula.

Example: Type **-commission**

Your formula now looks like this: =37+sales-commission.

4 Click the Enter box in the formula bar.
–or–
Press ENTER.

Inserting a list of range names into a spreadsheet

You can insert into your spreadsheet a list that shows the range names and references you have created. You can use the range list to help you locate specific information.

To insert a list of range names into a spreadsheet

List replaces data
Inserting a list into a range replaces any existing data in that range.

1 Highlight the cell in the upper-left corner of the group of cells in which you want to put the list.

2 From the Edit menu, choose Range Name.

3 Choose the List button.

Works inserts the list of range names into the spreadsheet.

Using dates and times for references and calculations

How Works calculates dates and times

Works actually uses serial numbers to calculate dates and time. If you type a date or time that Works does not recognize as a date or time into a cell that is not formatted for date or time, you will see a serial number. Format the cell with a date or time format.

You can also type dates and times into cells and use them in formulas. For example, you can:

- Keep track of events, such as, the date and time you created and modified the spreadsheet.
- Label your information, such as, expenditures for the month of May.
- Calculate events, such as, the hours required to complete a project.

The Works calendar begins with January 1, 1900 and ends with June 3, 2079. If you use a date or time outside this range, Works interprets it as text.

The following table shows the date and time formats you can use:

International dates and times

Date and time formats are displayed according to which country you have chosen in the Windows Control Panel International dialog box. If you have selected United Kingdom as the country and English (International) as the language, the month-day-year format is changed to day-month-year. For more information on changing the country setting, see your Windows documentation.

Format		**Example**
Long	Month, day, year	October 30, 1960
	Month, year	October 1960
	Month, day	October 30
	Month only	October
Short	Month, day, year	10/30/60
	Month, year	10/60
	Month, day	10/30
24-hour	Hour, minute, second	14:30:00
	Hour, minute	14:30
12-hour	Hour, minute, second	2:30:00 PM
	Hour, minute	2:30 PM

To quickly enter a date or time

1 Type the date or time you want to enter in any of the formats in the preceding table.

Example: Type **10/30/60**

If Works displays the serial number rather than the date or time you expect, use the procedure that follows to format the cell.

2 Click the Enter box in the formula bar.
–or–
Press ENTER.

Works displays the date according to how the cell is formatted.

Example: Works displays what you typed, 10/30/60, if the cell has not been formatted with a specific date format, or Works displays October 30, 1960 if you previously formatted the cell to display the long format for month, day, year.

To change the date or time format of a cell or range

1 Highlight the cell or range you want to change.

2 From the Format menu, choose Time/Date.

3 Choose the date or time format you want.

4 Choose the OK button.

Inserting the current date or time

You can insert the current date or time into a spreadsheet in two ways. In the first way, you insert a date or time that does not change if you recalculate.

In the second way, you insert a date or time that changes, if necessary, to show the current date or time each time you recalculate. Unless Manual Calculation is on, this may be every time you make an entry.

To insert a non-recalculating date or time

Incorrect date or time inserted? If the shortcut method does not insert the correct date or time, you may need to reset your computer's date and time. For information on how to reset your computer's date and time, see your computer manual.

1 Highlight the cell in which you want the date or time.

2 Press CTRL+; (semicolon) to enter the current date.
–or–
Press CTRL+SHIFT+; (semicolon) to enter the current time.

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

To insert a recalculating date or time

1. Highlight the cell in which you want the date or time.
2. Type **=now()**

   You do not need to type anything within the parentheses.
3. Click the Enter box in the formula bar.

   –or–

   Press ENTER.

   The serial number that Works uses to calculate the date or time is displayed in the cell.
4. Format the cell with the date or time format you want.

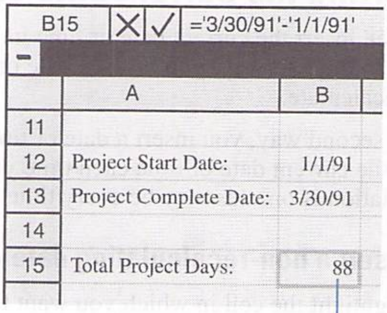
   The serial number in the cell is replaced by today's date or the current time in the format you chose.

Using a date or a time in a formula

You can use dates or times in formulas to make it easy for you to:

- Calculate the number of days in a project.
- Determine the amount of time that has elapsed between events.

For example, to calculate the elapsed days between the date in cell B13 (3/30/91) and the date in cell B12 (1/1/91), type **=B13-B12** in cell B15. The result, 88 days, will be displayed in cell B15.



B15 ='3/30/91'-'1/1/91'

	A	B
11		
12	Project Start Date:	1/1/91
13	Project Complete Date:	3/30/91
14		
15	Total Project Days:	88

Works computes the total number of days spent on the project and displays the number in cell B15.

If you're using actual dates or times rather than cell references to create your formula, enclose the date or time in single quotation marks ('). For example, the formula ='3/30/91'-'1/1/91' calculates the number of days (88) between the two dates.

Searching for specific text or values

You can instruct Works to look quickly through a selection or an entire spreadsheet to find specific text or values in a cell or formula. When Works finds the search item, it highlights the cell containing that item. For example, you can:

- Search for exact matches to specific entries you've made.
- Search through the formulas in your spreadsheet to locate cell and range references.
- Search for information when you're not exactly certain how it was spelled or how it was entered in the spreadsheet.

Works searches for exact matches to what you ask it to search for. For example, if you enter 1234.55 in a cell, and then give the cell a comma format, Works displays 1,234.55. If you then want to search for that value, you must type 1,234.55 as the search for text. Works will not find the value if you search for 1234.55.

In searching for text, Works also searches for exact matches except that it does not differentiate between uppercase and lowercase letters.

To search through a spreadsheet or a selection

When a cell displays #####
If a cell is not wide enough to display an entry and displays ##### instead, Works cannot search to find the actual value in that cell. Works can, however, search for cells containing #####.

Searching through formulas
By turning on the Show Formulas command from the Options menu before you search, you can search through formulas in a spreadsheet to locate elements of a formula (such as cell or range references) that would otherwise not be located by the search.

1 Highlight the group of cells you want to search.

To search the entire spreadsheet, do not highlight a group of cells.

2 From the Select menu, choose Find.

3 In the Find What box, type the item you want to find.

4 In the Look By box, choose either the Rows or Columns option button.

If you choose the Rows option button, Works searches left to right by rows. If you choose the Column option button, Works searches top to bottom by columns.

5 Choose the OK button.

When Works finds the information you are looking for, it highlights the first cell in which it finds it.

To repeat the previous search

▶ Press F7.

Searching to find cells in which the contents are similar, but not identical

You can use the question mark (?) and asterisk (*) as wildcard characters to help you find cells in which the contents are similar, but not exactly the same.

The question mark (?) wildcard represents any single character in the same position as the question mark. For example, if you want to find a name in your spreadsheet, but you're unsure whether the name is Anderson or Andersen, type **anders?n** and Works will find both names. When Works finds the search text, it highlights the cell.

The asterisk (*) wildcard represents any number of characters in that position within the word. For example, if you type **s*s** Works finds all text that begins with an "s" and ends with an "s," such as sales, series, and salaries.

Since Works searches without regard to whether it is searching for a whole word, or not, Works will also find text that has the s*s sequence within a word. For example, Works will find insist, salsa, suspicion, and sister in the same search that locates sales, series, and salaries. Be as specific as you can when you define your search to avoid needlessly running lengthy searches that may find more than what you're looking for.

To use a wildcard in a search

1 Highlight the group of cells you want to search.
–or–
To search the entire spreadsheet, do not highlight a group of cells.

If you are looking for a cell or range reference in a formula, choose the Show Formulas command from the Options menu.

2 From the Select menu, choose Find.

3 In the Find What box, type the item you want to find, including any wildcards you want to use.

For example: type **4*** to find all the values that contain the number 4 as the first number.

4 In the Look By box, choose either the Rows or Columns option button.

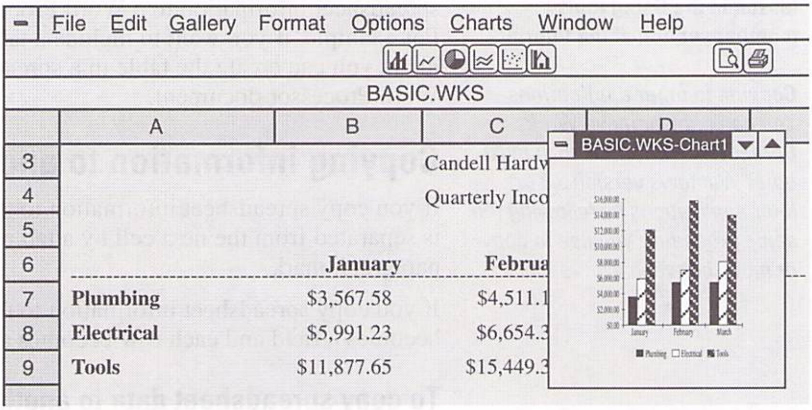
5 Choose the OK button.

When Works finds the information, it highlights the first cell in which it finds it.

Charting spreadsheet data

For information on how to create a chart using spreadsheet data, see the topic "Creating a chart" on page 176.

With Works, you can translate spreadsheet rows and columns into chart form. Then, if you change the spreadsheet information upon which a chart is based, Works automatically updates the chart to match.


File
Edit
Gallery
Format
Options
Charts
Window
Help
BASIC.WKS
BASIC.WKS-Chart1
$16,000.00
$14,000.00
$12,000.00
$10,000.00
$8,000.00
$6,000.00
$4,000.00
$2,000.00
$0.00
January
February
March
Plumbing
Electrical
Tools

	A	B	C	D
3			Candell Hardw	
4			Quarterly Inco	
5				
6		**January**	**Februa**	
7	**Plumbing**	$3,567.58	$4,511.1	
8	**Electrical**	$5,991.23	$6,654.3	
9	**Tools**	$11,877.65	$15,449.3	

Using the Spreadsheet with other Works tools

For a tutorial, press SHIFT+F1, and go to the "Sharing information" lesson in the Using tools together section of the tutorial.

You can avoid repetitive typing and ensure the consistency of your information across all Works tools by using the Copy command to copy spreadsheet information to a Word Processor document or the Database. For example, if you want to include a table in a Word Processor document, you can create the table in a spreadsheet and then copy it into a Word Processor document.

Copying to other applications
You can copy or move Works Spreadsheet information in most other Windows version 3.0 or later applications by following the same procedure you use to copy or move between Works tools.

Copying information to another Works tool

If you copy spreadsheet information to the Word Processor, each cell is separated from the next cell by a tab mark and each row ends with a paragraph mark.

If you copy spreadsheet information to the Database, each column becomes a field and each row becomes a record.

To copy spreadsheet data to another Works tool

1. Highlight each cell you want to copy.
2. Press CTRL+INS.
   –or–
   From the Edit menu, choose Copy.
3. Open another Works document, or switch to another open document.
4. Move the insertion point to where you want to place the copy.
5. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

To ensure faster copying
When copying information from the Spreadsheet to the Word Processor, highlight only the information you want to copy rather than the entire spreadsheet. If you highlight the entire spreadsheet, Works will copy all 16,384 rows of the spreadsheet, a time-consuming process.

Copying information from another Works tool

You can also copy text from a Word Processor document to a spreadsheet. If you copy a table with columns separated by tab marks into a spreadsheet, each item in the table is inserted into an individual cell. If you copy paragraphs of text from a Word Processor document, each paragraph is inserted into its own cell.

You can also copy all or part of a database to a spreadsheet. Information from the database is copied to the spreadsheet as a table. Each field becomes a column and each record becomes a row.

To copy information from a Word Processor document or database

1 Highlight the information you want to copy.

2 Press CTRL+INS.
–or–
From the Edit menu, choose Copy.

3 Open a spreadsheet, or switch to an open spreadsheet.

4 Move the highlight to where you want to place the copy.

5 Press SHIFT+INS.
–or–
From the Edit menu, choose Paste.

Protecting entries from changes or deletions

You can protect the entries you make in a spreadsheet from accidental changes or deletions. Using cell protection will keep you or others from destroying valuable entries and you won't have to worry about accidentally typing over or deleting a complicated formula.

Initially, Works locks all cells in a spreadsheet, but, until you turn protection on for the entire spreadsheet, the locks have no effect. When cell protection is on, you cannot format a cell, change its contents, or unlock it.

To lock or unlock a cell or group of cells

Want to protect some cells but not others?
Protecting some cells but not others is a two-step process. First, you unlock the cells you do not want to protect. Second, you turn on protection for the remaining cells, the ones you do want to protect.

1. Highlight each cell you want to lock or unlock.
2. From the Format menu, choose Style.
3. Choose the Locked check box to lock the selection.
   –or–
   Choose the Locked check box again to clear the check box and unlock the selection.
4. Choose the OK button.

To turn cell protection on or off

Moving the highlight when protection is on
With protection on, you can use the TAB and SHIFT+TAB keys to move to only the unlocked cells.

▶ From the Options menu, choose Protect Data.

When Protect Data is chosen, a mark is displayed beside the command name on the Options menu. To turn off Protect Data, choose the command again.

Hiding columns

You can hide data that you don't want your co-workers or clients to see in hidden columns, which don't appear in the window or when you print out the spreadsheet. Although you can't see the data in these hidden columns, the values and formulas within them calculate along with the rest of the spreadsheet. If a column is protected, you must turn protection off before hiding the column.

To quickly hide a column

Scrolling and hidden columns
You cannot use the arrow keys to scroll through the cells of a hidden column.

▶ Drag the right column border to the left until the column is hidden.

To hide a column

1 Highlight any cell in the column you want to hide.

To hide one or more columns that are adjacent to each other, highlight a cell in each column you want to hide.

2 From the Format menu, choose Column Width.

3 Type **0** (zero).

4 Choose the OK button.

The column is no longer visible on the screen.

To display a hidden column and highlight a cell

1 From the Select menu, choose Go To.

2 In the Go To box, type a reference for any cell in the column you want to display.

Example: Type **E1**

3 Choose the OK button.

The column is highlighted, but it is not displayed.

4 From the Format menu, choose Column Width.

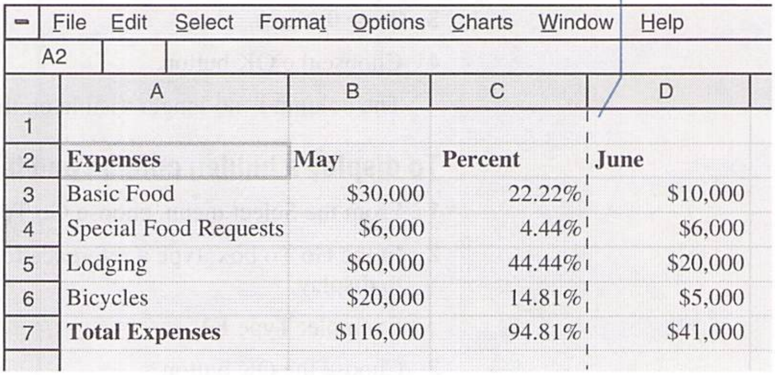
5 Type a value greater than 0 (zero).

6 Choose the OK button.

The column is now displayed, and the cell whose cell reference you typed is highlighted.

Setting page breaks

When you print more data than can fit on one sheet of paper, Works automatically breaks the spreadsheet into pages. You can set your own page breaks. When you do, a page break mark (--) or (¦) appears at the row or column where a new page begins.

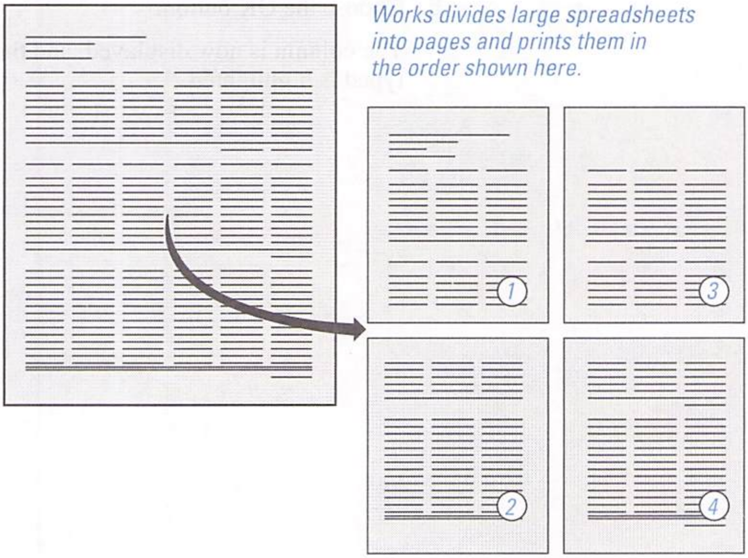


	A	B	C	D
1				
2	**Expenses**	**May**	**Percent**	**June**
3	Basic Food	$30,000	22.22%	$10,000
4	Special Food Requests	$6,000	4.44%	$6,000
5	Lodging	$60,000	44.44%	$20,000
6	Bicycles	$20,000	14.81%	$5,000
7	**Total Expenses**	$116,000	94.81%	$41,000

This line indicates a manually inserted vertical page break.

In the Spreadsheet, you can set vertical as well as horizontal page breaks. When you print a spreadsheet that is larger than a single page, pages print in the order shown in the following illustration:

Another way to control what prints on each page
If you need to fit all your data onto a certain number of pages, you can try changing the font size. With a smaller font size, you can fit more data on each page. For information on changing font size, see "Using fonts, font styles, and cell borders for emphasis" on page 126.



Works divides large spreadsheets into pages and prints them in the order shown here.

To insert a manual page break

1. Highlight the row or column where you want to insert a page break.
2. From the Edit menu, choose Insert Page Break.

   If Works asks where to place the page break, choose the Row option button for a horizontal page break or the Column option button for a vertical page break.
3. Choose the OK button.

To delete a manual page break

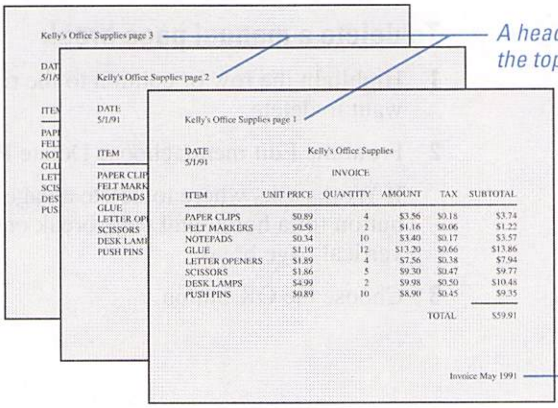
1. Highlight the row or column to the right or below the page break you want to delete.
2. From the Edit menu, choose Delete Page Break.

   If Works asks where to delete a page break, choose the Row option button for a horizontal page break or the Column option button for a vertical page break.
3. Choose the OK button.

Numbering pages and creating headers and footers

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing " lesson in the Spreadsheet and charting section of the tutorial.

Headers and footers typically contain page numbers, titles, or dates. You can choose to print simple headers or footers with only page numbers on each page of the spreadsheet, or you can include more detailed information along with the page numbers in headers and footers.


Kelly's Office Supplies page 3
Kelly's Office Supplies page 2

Kelly's Office Supplies page 1

DATE
5/1/91

Kelly's Office Supplies

INVOICE

ITEM	UNIT PRICE	QUANTITY	AMOUNT	TAX	SUBTOTAL
PAPER CLIPS	$0.89	4	$3.56	$0.18	$3.74
FELT MARKERS	$0.58	2	$1.16	$0.06	$1.22
NOTEPADS	$0.34	10	$3.40	$0.17	$3.57
GLUE	$1.10	12	$13.20	$0.66	$13.86
LETTER OPENERS	$1.89	4	$7.56	$0.38	$7.94
SCISSORS	$1.86	5	$9.30	$0.47	$9.77
DESK LAMPS	$4.99	2	$9.98	$0.50	$10.48
PUSH PINS	$0.89	10	$8.90	$0.45	$9.35
				TOTAL	$59.91

Invoice May 1991

A header is text that appears at the top of every printed page.

A footer is text that appears at the bottom of every printed page.

To insert page numbers

1 From the Edit menu, choose Headers & Footers.

2 Choose from the following:

To insert page numbers	Type
Centered at the top of the page	**&p** in the Header box
Centered at the bottom of the page	**&p** in the Footer box
Right-aligned at the top of the page	**&r&p** in the Header box
Right-aligned at the bottom of the page	**&r&p** in the Footer box
Left-aligned at the bottom of the page	**&l&p** in the Header box
Left-aligned at the bottom of the page	**&l&p** in the Footer box

3 Choose the OK button.

To see your headers and footers before you print, click the Print Preview button on the Toolbar.

To change the starting page number

1. From the File menu, choose Page Setup & Margins.
2. In the 1st Page Number box, type the number you want to print on the first page.
3. Choose the OK button.

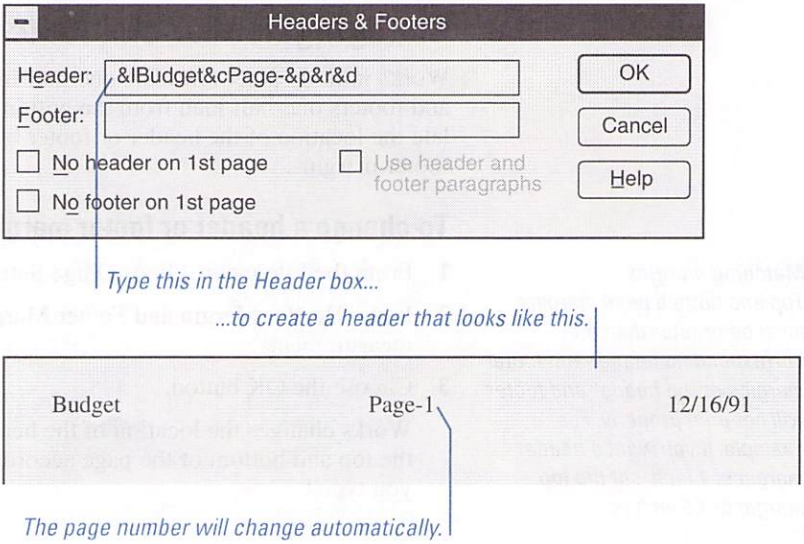
   Works numbers the pages sequentially, beginning with the first page number you specify.

To remove page numbers

1. From the Edit menu, choose Headers & Footers.
2. If the page numbers are in the header, highlight the code, and then press DEL.
   –or–
   If the page numbers are in the footer, highlight the code, and then press DEL.
3. Choose the OK button.

Creating a header or footer

Works provides special header and footer codes, which can be used in a variety of combinations to create headers and footers.



Header: &lBudget&cPage-&p&r&d
Footer:
☐ No header on 1st page
☐ No footer on 1st page
☐ Use header and footer paragraphs

Type this in the Header box...

...to create a header that looks like this.

Budget Page-1 12/16/91

The page number will change automatically.

To create a header or footer

1. From the Edit menu, choose Headers & Footers.
2. Type text in the Header and Footer boxes, using any of the following special header and footer codes if you wish:

To	Type
Print the page number	&p
Print the filename	&f
Print the date	&d
Print the current date in long format	&n
Print the time	&t
Print a single ampersand character	&&
Align the characters that follow at the left or right margin	&l or &r
Center the characters that follow between the margins	&c

3. Choose the OK button.

   To see your headers and footers before you print, click the Print Preview button on the Toolbar.

You don't have to use codes
If you prefer, you can simply type text in the Header and Footer boxes. For example, type Jones Family Budget in the Header box to create a header that prints across the top of each page of your spreadsheet.

If you can't see your header or footer
The text for a header or footer is not displayed in your document window, but you can see it when you print or preview the spreadsheet.

Changing header and footer margins

Works initially places headers one-half inch from the top of the page and footers one-half inch from the bottom of the page. You can manipulate the location of the header or footer by changing the header or footer margins.

To change a header or footer margin

1. From the File menu, choose Page Setup & Margins.
2. In the Header Margin and Footer Margin boxes, type new measurements.
3. Choose the OK button.

   Works changes the location of the headers and footers in relation to the top and bottom of the page according to the new measurements you typed.

Matching margins
Top and bottom page margins must be greater than the corresponding header and footer margins or the header and footer will not print properly. For example, if you want a header margin of 1 inch, set the top margin to 1.5 inches.

Removing a header or footer from the first page

Sometimes the first page of your spreadsheet may contain titles, labels, or other special introductory or explanatory information. In that case, you may want to turn off the header or footer for the first page only.

To remove a header or footer from the first page

1. From the Edit menu, choose Headers & Footers.
2. Choose the No Header On 1st Page, No Footer On 1st Page check box, or both.

   An X is displayed in the check box to indicate the option is turned on.
3. Choose the OK button.

To turn off all headers or footers

1. From the Edit menu, choose Headers & Footers.
2. If there is text in the Header box, highlight the code, and then press DEL.
   –or–
   If there is text in the Footer box, highlight the code, and then press DEL.
3. Choose the OK button.

Previewing a spreadsheet before printing

For a tutorial, press SHIFT+F1 and go to the "Working with Files" lesson in the Starting with Works section of the tutorial.

If you change window size
The actual size in which Works displays pages and their contents in the various zoom views depends on the size of the print preview window. If you make the window smaller, Works scales down the pages and their contents.

The Works Print Preview command lets you look at the pages of your spreadsheet as they will appear when you print. By viewing the pages in this way, you can often find and correct mistakes before printing.

In print preview, you can look at each page in three different ways:

- In the standard view, Works scales down each page and you can see the entire page, including any headers and footers.
- In half-zoom view, Works displays the text and objects approximately one-half the size that they appear in the document window.
- In full-zoom view, Works displays the text and objects approximately the same size that they appear in the document window.

To preview a spreadsheet

▶ On the Toolbar, click the Print Preview button.

Print Preview button

–or–

From the File menu, choose Print Preview.

Works opens the print preview window and displays the first page of the spreadsheet.

Moving through a spreadsheet and viewing pages in print preview

In print preview, you can view all the pages in your spreadsheet, zoom (enlarge) pages in order to see more detail, and scroll zoomed pages in order to see any portion of them. The following table describes how to zoom in on and view spreadsheet pages.

To	With the mouse	On the keyboard
Move to the next page	Click the Next button	Press PAGE DOWN
Move to the previous page	Click the Previous button	Press PAGE UP
Zoom in to the next zoom level (half-zoom or full-zoom)	Click the Zoom In button -or- Click on the page	Press ALT+I

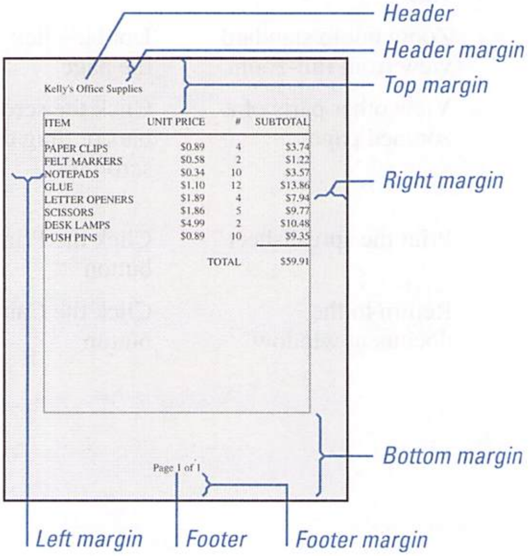
To	With the mouse	On the keyboard
Zoom in to full-zoom from standard view	Double-click the page	Press ALT+I twice
Zoom out to the previous level (half-zoom or standard view)	Click the Zoom Out button	Press ALT+O
Zoom out to standard view from full-zoom	Double-click the page	Press ALT+O twice
View other parts of a zoomed page	Click the scroll bars or drag the scroll box	Press the appropriate arrow key to scroll up, down, right, or left
Print the spreadsheet	Click the Print button	Press ALT+P
Return to the document window	Click the Cancel button	Press ALT+ESC

Changing page and margin settings

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Spreadsheet and Charting section of the tutorial.

Custom page and margin settings
If you regularly use page and printer options other than Works preset options, you can create a template to set the printer options you want whenever you create a new document. See "Creating a spreadsheet template" on page 165.

Page and margin settings determine how Works prints your information on a page. For example, you can change page margins to make room for headers and footers or to make your page more attractive. The page margins you set affect every printed page.



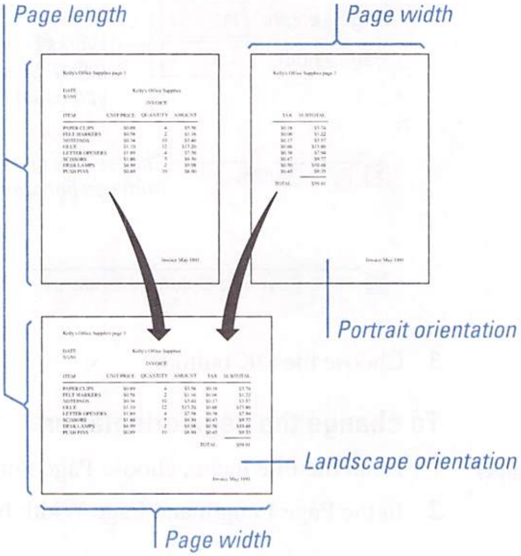
Kelly's Office Supplies

ITEM	UNIT PRICE	#	SUBTOTAL
PAPER CLIPS	$0.89	4	$3.74
FELT MARKERS	$0.58	2	$1.22
NOTEPADS	$0.34	10	$3.57
GLUE	$1.10	12	$13.86
LETTER OPENERS	$1.89	4	$7.94
SCISSORS	$1.86	5	$9.77
DESK LAMPS	$4.99	2	$10.48
PUSH PINS	$0.89	10	$9.35
		TOTAL	$59.91

Page 1 of 1

When you change margin settings, Works remembers the settings. You don't have to change them again for that spreadsheet unless you want to change the way Works prints it.

Works is preset to print on letter-size (8.5-by-11-inch) paper. But, if you use different-sized paper you can change the page size to match. For example, you could print on legal-sized paper by typing a page length of 14 inches. You can also choose to print in either portrait or landscape orientation.

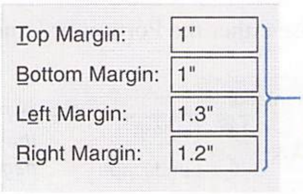


To change page setup and margin settings

1 From the File menu, choose Page Setup & Margins.

2 Type new measurements for any settings you want to change and turn on the options you want to use.

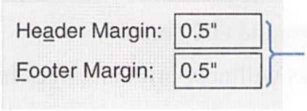
Changing measurement units
You can change the unit of measurement when typing margin or page size by including the appropriate abbreviation after the spacing value—for example: .5in for inches, 1.26cm for centimeters, 3pi for picas, or 37pt for points.



Top Margin: 1"
Bottom Margin: 1"
Left Margin: 1.3"
Right Margin: 1.2"

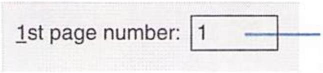
Adjust the size of a page's print area by increasing or decreasing the margin size.

Printing gridlines and row and column headers
Printing gridlines and row and column headers may make it easier for you to find information in your printed spreadsheet.



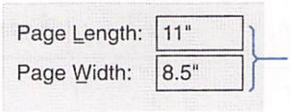
Header Margin: 0.5"
Footer Margin: 0.5"

To print properly, header and footer margins must be smaller than the top and bottom page margins.



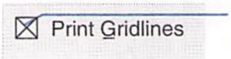
1st page number: 1

Specify the starting page number. Works numbers the pages sequentially, beginning with the number you specify.



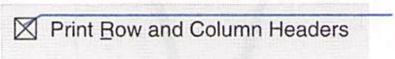
Page Length: 11"
Page Width: 8.5"

Works is preset to print on 8.5-by-11-inch paper. Change the page measurements if you use different size paper.



☒ Print Gridlines

Choose this option to print gridlines between entries.



☒ Print Row and Column Headers

Choose this option to print row and column headers.

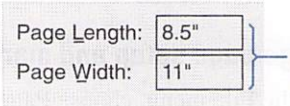
3 Choose the OK button.

To change the page orientation

Will your printer print sideways? *Not every printer can print in landscape orientation. For information about your printer, check you printer documentation.*

1 From the File menu, choose Page Setup & Margins.

2 In the Page Length and Page Width boxes, reverse the measurements.



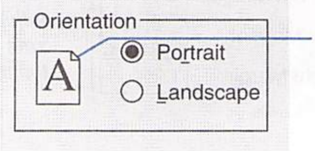
Page Length: 8.5"
Page Width: 11"

For landscape orientation, reverse the normal portrait measurements.

3 Choose the OK button.

4 From the File menu, choose Printer Setup.

5 Choose either the Portrait or Landscape option button.



Orientation
● Portrait
○ Landscape

In Portrait orientation, pages are longer than they are wide. In Landscape orientation, pages are wider than they are long.

6 Choose the OK button.

Works will now print all pages in the orientation you chose.

Printing a spreadsheet

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Spreadsheet and Charting section of the tutorial.

Before printing, you should make sure that your spreadsheet is designed the way you want it. The following table suggests options to check:

To	See page
Check how a document will look when printed by viewing its pages on the screen	158
Specify other fonts and font sizes	126
Specify headers and footers	155
Set your own page breaks	152
Hide columns that you don't want printed	150

Important You can save time and paper if you use print preview to check your chart before printing. Then, if necessary, adjust page margins, font size, orientation, and so on. For information about all page and margin options, see "Changing page and margins settings" on page 160.

To print a spreadsheet

1 On the Toolbar, click the Print button.

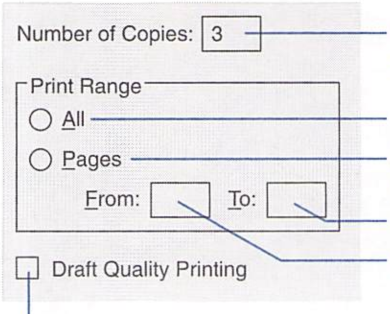
Print button

–or–

From the File menu, choose Print.

2 To print more than one copy of the spreadsheet, type the number of copies you want in the Number Of Copies box.

What is draft quality?
When you print using the Draft Quality Printing option, Works does not print font styles (bold, italic, and underline) and it does not print gridlines.



Number of Copies: 3

Print Range

○ All

○ Pages

From: To:

☐ Draft Quality Printing

Type the number of copies of the document you want Works to print.

Choose All to print the entire document.

Choose Pages if you want to print only a portion of the document.

Type the last page to print.

Type the first page to print.

Choose Draft Quality Printing when you want Works to print as quickly as possible.

3 Choose the OK button.

To print only a specific portion of a spreadsheet

1 Highlight the portion of the spreadsheet you want to print.

2 From the File menu, choose Set Print Area.

3 From the File menu, choose Print.

4 Choose the options you want (see the previous procedure "To print a spreadsheet").

5 Choose the OK button.

Printing gridlines and row and column headers
Printing gridlines and row and column headers may make it easier for you to find information in your printed spreadsheet. If you want to print gridlines or row and column headers, choose Page Setup & Margins from the File menu. Then, choose the Print Gridlines or Print Row And Column Headers check boxes.

To reset the entire spreadsheet as the print area

1 From the Select menu, choose All.

2 From the File menu, choose Set Print Area.

The next time you choose the Print command from the File menu, Works will print the entire spreadsheet.

Creating a spreadsheet template

A template is a document you create to reduce the need to do the same work over and over. It can contain standard settings, text, and formats that do not change from spreadsheet to spreadsheet.

When you create a template, Works turns on the Spreadsheet template option and automatically includes the template information and settings in any new documents you create.

A useful template
Create a template that contains headers and footers, uses a specific font, has a specific format, and contains column and row headings you use often.

You can turn off the template option at any time in order to create new documents that do not contain the template information or settings. If you later want to include other information in your template, you can change it. You can also create a new template and save it in place of the existing template.

To create a template for the first time or to replace an existing template

1. Create a new spreadsheet or open an existing one.
2. Type any headings or labels that you want included in the template.
3. Make any settings that you want included in the template. For example: margin settings, font and font size, and so on.
4. From the File menu, choose Save As.
5. In the Save Files As Type box, choose SS Template.

   Works names the template document for you. The Spreadsheet template is named TEMPLATE.KS
6. Choose the OK button.

   If a template already exists, Works asks if you want to replace the existing template. Choose the OK button to replace the old template with the one you have just created.

To turn off or turn on the template option

1. From the Options menu, choose Works Settings.
2. Under Use Templates For, choose the Spreadsheet check box.

   An X is displayed in the check box when the Spreadsheet option is turned on, choosing it again turns it off.
3. Choose the OK button.

To change a template

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type box, choose All Files (*.*).
3. In the File Name box, choose TEMPLATE.KS.
4. Make any changes you want to the template.
5. From the File menu, choose Close.

   Works asks if you want to replace the existing template.
6. Choose the Yes button to replace the old template.

Using the Spreadsheet with other applications

You can use the Works Spreadsheet with a number of other spreadsheet applications, such as Microsoft® Excel, Lotus 1-2-3, and other compatible applications.

Using a Microsoft Excel worksheet with Works

When using Microsoft Excel, save your spreadsheet in Works format and then open the spreadsheet in Works.

To save an Excel worksheet you want to use in Works

Want to open a Works spreadsheet in Microsoft Excel? *Microsoft Excel can open Works spreadsheets directly. You don't need to save the spreadsheet in any special format. Simply open the Works spreadsheet in Microsoft Excel.*

1 In Microsoft Excel, open the worksheet you want to use in Works.

2 From the File menu, choose Save As.

3 Choose the Options button.

4 In the File Format box, choose WKS.

5 Choose the OK button.

In the Save Worksheet As box, Microsoft Excel changes the filename extension to .WKS, which indicates that you can now open the spreadsheet in Works.

6 Choose the OK button.

Microsoft Excel saves your worksheet with the new filename extension. Your original Microsoft Excel file, with the .XLS filename extension, remains unchanged.

7 Quit Microsoft Excel, and then open the worksheet in Works.

Using a Lotus 1-2-3 spreadsheet with Works

You can work interchangeably with Works and Lotus 1-2-3 version 1.x and 2.0 spreadsheets, or spreadsheets that are compatible with Lotus 1-2-3. Works can open Lotus 1-2-3 version 1.x and 2.0 spreadsheets, and Lotus version 1.x or 2.0 can open Works spreadsheets. If you want to use a Works spreadsheet with Lotus 1-2-3 version 2.2 or later, you need to save it in a special format.

To save a Works spreadsheet as a Lotus 1-2-3 version 2.2 or later spreadsheet

1. Open the spreadsheet in Works that you want to save as a Lotus 1-2-3 spreadsheet.
2. From the File menu, choose Save As.
3. In the Save File As Type box, choose Lotus Only.
4. Choose the OK button.

   Works saves your spreadsheet with a new filename extension. Your original Works spreadsheet, with the .WKS filename extension, remains unchanged.

To open a Lotus 1-2-3 spreadsheet in Works

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type box, choose All Files (*.*).
3. In the File Name box, choose the name of the 1-2-3 spreadsheet, or type the name of the 1-2-3 spreadsheet in the File Name box.
4. Choose the OK button.

Opening a spreadsheet that was created in another application

You can also use spreadsheets that were created in applications other than Lotus 1-2-3 or Microsoft Excel if the spreadsheet is a text file. Works recognizes cells separated by either commas or tab marks. You should be able to save a spreadsheet created in another application with one or both these formats.

To open a spreadsheet created in another application

What happens to formulas? *When you save a Works spreadsheet as a text file, the cell contents are retained as values, not as formulas. You will need to re-enter your formulas in the other application.*

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type, box, choose Text (*.txt).
3. In the File Name box, type the filename and filename extension of the text file you want to open, or choose the file from the list of files.
4. Choose the OK button.
5. In the Open File As dialog box, choose the Spreadsheet button.
6. Choose the OK button.

To save a spreadsheet to be used in another application

1 Open the spreadsheet you want to use in another application.

2 From the File menu, choose Save As.

3 In the Save File As Type box, choose Text & Commas, Text & Tabs, or Text & Tabs (DOS).

4 In the File Name box, type a filename and filename extension for the text version of the file.

Example: Type **amortize.txt**

5 Choose the OK button.

6 Choose the OK button to accept loss of formatting.

The text file is saved on your disk. Your original file continues to be displayed and is not replaced or altered.

Which Text & Tabs option should you choose?
Works give you two options for saving text files in the Text & Tabs format because not all applications read files in the same way. If you are having a problem opening a text file in another application, try saving the file using the other option.

Naming, saving, duplicating, and reopening a spreadsheet

After you create a spreadsheet you should immediately save it on your disk. Until you save your work on your disk, it is temporary (stored only in the computer's memory) and can be lost because of a power interruption or equipment failure.

Besides saving a spreadsheet, you can:

- Make an identical, backup copy as extra protection against losing your work. When you turn on the Make Backup Copy option, Works updates the backup copy every time you save the original spreadsheet.
- Duplicate it to create an new spreadsheet. This is useful when you want two spreadsheets that are similar, but not exactly the same (for example, two budgets for two different clients).
- Reopen the spreadsheet to change, view, or print it.

You can also open spreadsheets created by others, and you can open any of the sample spreadsheets that come with Works, in order to view them or to adapt them to your own use. For information on opening and using the sample spreadsheets that come with Works, see "Jump Right In" in *Getting Started.*

To name and save a spreadsheet and make a backup copy

To name and save a spreadsheet in other formats
If you want to save a Works spreadsheet to use with another application, such as Microsoft® Word for Windows, see the section "Using the Spreadsheet with other applications" on page 167.

1. From the File menu, choose Save As.
2. In the File Name box, type a name for the spreadsheet that has no more than eight characters.

   You do not need to type the filename extension .WKS. Works automatically adds it to the filename you type.
3. To make a backup copy of the spreadsheet, turn on the Make Backup Copy check box.

   If you do, Works makes a new backup each time you save the spreadsheet. Backup spreadsheets have the same name as the original spreadsheet, except the extension is .BKS.
4. Choose the OK button.

To duplicate a spreadsheet

1 If you have not already done so, save the spreadsheet you want to duplicate.

2 From the File menu, choose Save As.

3 In the File Name box, type a new name for the duplicate spreadsheet.

Example: If the original spreadsheet is named BUDGET.WKS, you might type **Budget2** as the name of the duplicate spreadsheet.

4 Choose the OK button.

Works gives the spreadsheet the new name you specified and saves it. The original spreadsheet still exists and you can open it again if you want.

To open an existing spreadsheet

If you don't see your spreadsheet
If the spreadsheet you want to open isn't in the list, try choosing a different drive or directory or changing the type of file listed in the File Name box.

1 From the File menu, choose Open Existing File.

2 From the list of files in the File Name box, choose the spreadsheet you want to open.

3 Choose the OK button.

Setting which files to open when you start Works

Turn off the Welcome

The first time you open Works, a Welcome box is displayed. If you would like to skip this screen each time you start Works, choose the Skip Welcome Screen button. If you later need introductory information, choose Tutorial from the Help menu.

If you regularly work with the same spreadsheets, you can save your workspace so that Works will open those spreadsheets or other documents automatically every time you start Works.

When Works automatically opens the documents you specify, it also arranges and sizes your document windows exactly as you had them.

If you set Works to open specific documents, you might not want it to display the Welcome dialog box each time it starts. If you want, you can set Works so that it will no longer display this box during startup.

To open specific documents every time you start Works

1. Open all the documents you want Works to open when it starts.

   You can open any Word Processor, Spreadsheet, or Database documents.

2. Arrange the document windows exactly the way you want them.
3. From the File menu, choose Save Workspace.

   Works stores the information it needs to open your documents in exactly the same arrangement the next time you start Works. It also turns on the Use Saved Workspace check box in the Works Settings dialog box.

To reset Works so that it doesn't open specific documents

1. From the Options menu, choose Works Settings.
2. In the Works Settings dialog box, choose the Use Saved Workspace check box.

   A check box that doesn't have an X in it is cleared. To turn the option back on, choose the check box again.

3. Choose the OK button.

To turn off the Works Startup dialog box

1. Start Works in the normal manner.
2. From the Options menu, choose Works Settings.
3. In the Works Settings dialog box, turn off the Show Startup Dialog check box.

   A check box that doesn't have an X in it is cleared. To turn the option back on, choose the check box again.

4. Choose the OK button.

Dialing a telephone number that is in a spreadsheet

No modem, no dialing
If you do not have a modem, you cannot use automatic dialing.

Is your modem Hayes-compatible?
To determine if your modem is Hayes-compatible, see your modem documentation.

If you have a Hayes-compatible modem, you can use Works to automatically dial a telephone number to talk with someone. For example, if your bank's name and telephone number are included anywhere in your spreadsheet, and you need to confirm a deposit or other transaction, you can highlight the number in the spreadsheet, automatically dial the number, and then pick up your telephone when the other party answers. You can also include "in-house" extensions, and quickly contact co-workers or team project members regarding specific portions of your spreadsheet.

The telephone number you highlight must contain any special codes you would normally dial by hand. For example, to dial long distance you must include a 1 before the area code. For an in-house call, you simply enter the number into your spreadsheet in the same way you would dial it yourself.

To automatically dial a telephone number

Disconnect from other computers
You cannot dial a telephone number if you are already connected to another computer.

1. Open or switch to the spreadsheet containing the telephone number you want to dial.
2. Highlight the telephone number.
3. From the Options menu, choose Dial This Number.

   Works dials the number and then displays a message.
4. Pick up your telephone, and then choose the OK button.
   –or–
   If the call did not go through or you want to cancel automatic dialing, choose the Cancel button.

   Works returns to your spreadsheet.
5. When you're finished with the call, hang up the telephone.

Closing a spreadsheet and quitting Works

When you're finished with a spreadsheet, you have three options—close the spreadsheet you are working on, make the spreadsheet an icon on the workspace, or close the spreadsheet and quit Works.

Minimizing document windows
When you minimize a document window, an icon representing the tool the document was created with is displayed at the bottom of the Works workspace, along with the name of the document that was in the window when it was minimized. Each Works tool has its own icon.

To minimize the active spreadsheet

▶ Click the Minimize button.
–or–
Press ALT+HYPHEN to open the Control menu, and then choose Minimize.

To restore a minimized spreadsheet

▶ Double-click the minimized document icon.
–or–
Press ALT+HYPHEN to open the Control menu, and then choose Restore.

To close the active spreadsheet

▶ From the File menu, choose Close.
–or–
Press CTRL+F4.

You may see a message asking if you want to save the spreadsheet before closing. Choose the Yes button to ensure that the changes you have made are not lost. Choose the No button to discard any changes you have made.

To quit Works

▶ From the File menu, choose Exit.
–or–
Press ALT+F4.

You may see a message asking if you want to save the spreadsheet before closing. Choose the Yes button to ensure that the changes you have made are not lost. Choose the No button to discard any changes you have made.

Guide to Spreadsheet Charting

For a tutorial, press SHIFT+F1 and go to the "Charting" lesson in the Spreadsheet and Charting section of the tutorial.

Charts are easy-to-understand visual representations of spreadsheet information. They can help you analyze and interpret data, and they provide an effective and dynamic way to show trends and compare possibilities.

Here's what to do if you are new to charting:

To	See	On page
Create a basic chart	Creating a chart	178
Modify the chart	Changing a chart type	183
	Adding and deleting chart titles	198
	Changing colors and patterns	207
	Adding gridlines and borders, and changing marker shapes	209
Print the chart	Printing a chart	220

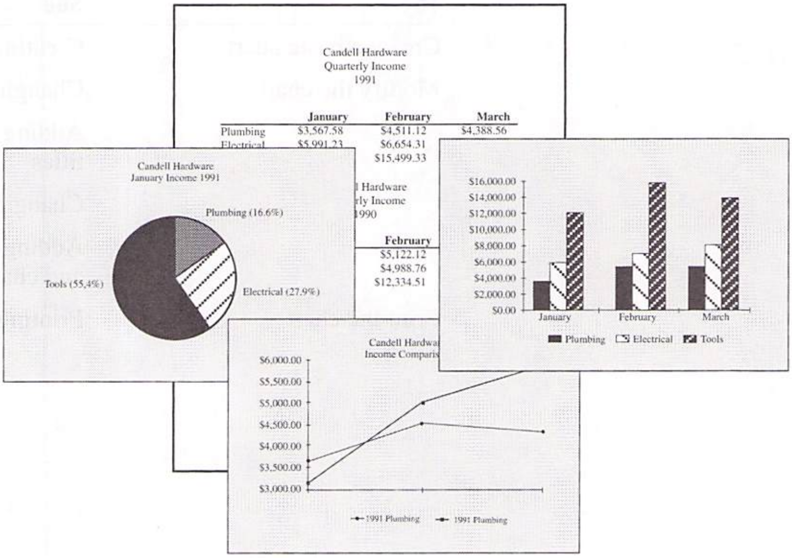
Creating a chart

For a tutorial, press SHIFT+F1 and go to the "Charting" lesson in the Spreadsheet and Charting section.

After you create a spreadsheet, you can create charts to display the document's information graphically. For example, if you created a spreadsheet to keep track of your business's quarterly income, you could create charts to:

- Indicate quarterly highs and lows.
- Compare this quarter's figures with last quarter's.
- Show the amount of income from all sources.

Inserting charts into a Word Processor document
You can insert charts into a Word Processor document—for example,to show growth or to illustrate trends. For information about inserting charts, see "Adding charts, drawings, and other objects" on page 31.



Each spreadsheet can have up to eight charts. If you change the spreadsheet information upon which a chart is based, Microsoft Works for Windows automatically updates the chart to match.

How Works plots a chart

Using values not in the spreadsheet
When plotting a chart, Works can only use values that exist in the spreadsheet. If you want to use values not in a spreadsheet, you must first enter them.

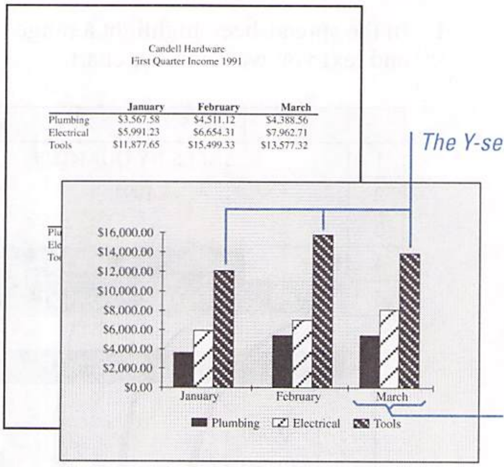
When you create a chart, Works automatically creates a Bar chart from the values you highlight. If you include text in the selection (headings above the values, labels to the left of the values, or both) Works uses the text to create labels and a legend for the chart.

For example, the illustration on the next page shows a chart created from a company's monthly income figures. Works created a cluster of bars, called a category for each month. All the category labels (January, February, and March) are together called the category (X) series.

Each bar represents one month's income for a specific department in the company—for example, the January income from the Tools department. The set of bars (one from each category) representing all three months' income for a specific department is called a Y-series, or value-series. The chart has three Y-series: Plumbing, Electrical, and Tools.

Using dates in a Y-series
When you include dates in a chart, Works always creates the category (X) series based on the location of the dates, regardless of the number of rows or columns you highlight.

How does Works decide?
Works creates the category (X) series based on the shape of the range you highlight. For example, if you highlight more columns than rows, Works groups columns as categories. If you highlight more rows than columns, Works groups the rows as categories.



Candell Hardware
First Quarter Income 1991

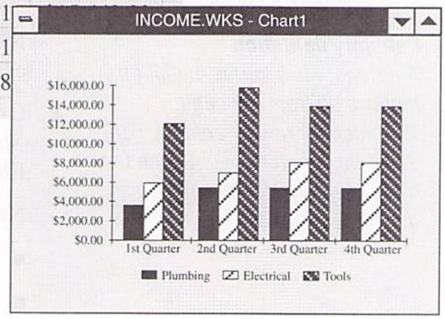
	January	February	March
Plumbing	$3,567.58	$4,511.12	$4,388.56
Electrical	$5,991.23	$6,654.31	$7,962.71
Tools	$11,877.65	$15,499.33	$13,577.32

The Y-series for Tools

The March category

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Plumbing	$3,567.58	$4,511.12	$4,388.56	$5,219.81
Electrical	$5,991.23	$6,654.31	$7,962.71	$6,532.58
Tools	$11,877.65	$15,499.33	$13,577.32	$10,884.21

	Plumbing	Electrical	Tools
1st Quarter	$3,567.58	$5,991.23	$11,877.65
2nd Quarter	$4,511.12	$6,654.31	
3rd Quarter	$4,388.56	$7,962.71	
4th Quarter	$5,219.81	$6,532.58	



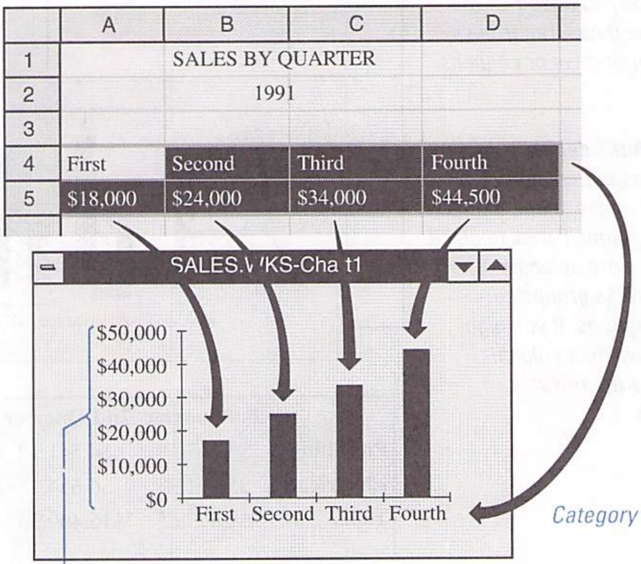
Works creates the same chart for both groups of information, despite their different organization. The four monthly income groups become the category (X) series,and the three department incomes become the value, or Y-series.

Creating a chart

You begin a chart by highlighting spreadsheet information and then letting Works plot and draw the chart for you.

To create a chart

1 In the spreadsheet, highlight a range of cells that contains the values and text you want in your chart.



	A	B	C	D
1		SALES BY QUARTER		
2		1991		
3				
4	First	Second	Third	Fourth
5	$18,000	$24,000	$34,000	$44,500

Category labels

Works creates a scale based on the range of spreadsheet values.

Category definition
A category is a series of values that are all from the same spreadsheet row or column. For example, a category could be the three monthly incomes in a quarterly report.

If the data you highlight includes column or row titles that identify the category (X) series, Works uses that text as category labels.

2 On the Toolbar, click the Chart button.
–or–
From the Charts menu, choose Create New Chart.

Next, Works:

- Opens a chart window.
- Makes the chart window the active window.
- Creates and displays a Bar chart.
- Names the new chart and adds it to the Charts menu.
- Displays the Charting menus.

For information on the types of charts you can create, see "Changing a chart type" on page 183.

You can now choose any Charting commands to change the chart type, make modifications to the chart, preview the chart, or print the chart. See "Modifying a chart," on page 180 for modification suggestions.

To switch back to the spreadsheet after creating a chart

▸ From the Window menu, choose the spreadsheet name.
–or–
Press CTRL+F6.

Saving a chart

For more information on saving spreadsheets, see "Naming, saving, duplicating, and reopening a spreadsheet" on page 170.

Works saves the charts you create (as many as eight for each spreadsheet) whenever you save their associated spreadsheet.

To save a spreadsheet and its charts

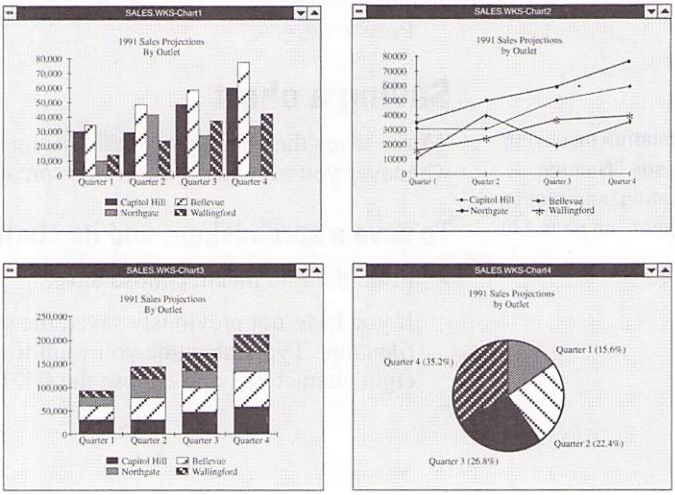
▸ From the File menu, choose Save.

If you have not previously saved the spreadsheet, Works asks for a filename. Type the name you want to give to the spreadsheet (up to eight characters), and choose the OK button.

Modifying a chart

For information on the types of charts you can create, see "Changing a chart type" on page 183.

In many instances, the initial chart that Works creates is all you need. In other instances, you might want to change the chart type; use different colors or patterns; add titles, labels, or a legend; or add or delete a category. For example, the charts in the following illustration show four ways to view the same information.


SALES.WKS-Chart1
1991 Sales Projections
By Outlet
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Quarter 1
Quarter 2
Quarter 3
Quarter 4
Capitol Hill
Bellevue
Northgate
Wallingford
SALES.WKS-Chart2
1991 Sales Projections
by Outlet
80000
70000
60000
50000
40000
30000
20000
10000
0
Quarter 1
Quarter 2
Quarter 3
Quarter 4
Capitol Hill
Bellevue
Northgate
Wallingford
SALES.WKS-Chart3
1991 Sales Projections
By Outlet
250,000
200,000
150,000
100,000
50,000
0
Quarter 1
Quarter 2
Quarter 3
Quarter 4
Capitol Hill
Bellevue
Northgate
Wallingford
SALES.WKS-Chart4
1991 Sales Projections
by Outlet
Quarter 1 (15.6%)
Quarter 4 (35.2%)
Quarter 2 (22.4%)
Quarter 3 (26.8%)

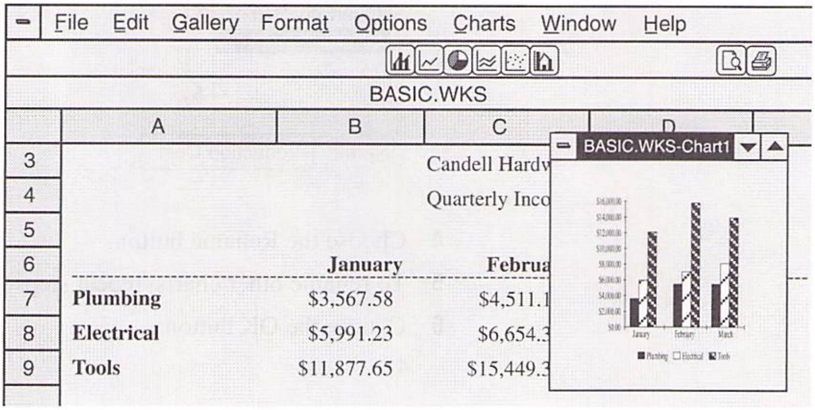
The following table suggests some of the changes you might want to make to the charts you create:

For information on	See page
Changing a chart type	183
Adding and deleting chart values	193
Adding and deleting axes, and changing scales	195
Adding and deleting chart titles	198
Changing fonts, font sizes, and font styles	206
Adding gridlines and borders and changing marker shapes	209

Viewing and naming a chart

For a tutorial, press SHIFT+F1 and go to the "Charting" lesson in the Spreadsheet and Charting section of the tutorial.

When you create a chart, Works displays it in a window on top of the spreadsheet that you created the chart from. You can switch between the chart and spreadsheet windows, or you can resize and arrange your spreadsheet and chart windows in order to see both the chart and its spreadsheet at the same time, as shown in the following illustration.


File
Edit
Gallery
Format
Options
Charts
Window
Help
BASIC.WKS
BASIC.WKS-Chart1
$16,000.00
$14,000.00
$12,000.00
$10,000.00
$8,000.00
$6,000.00
$4,000.00
$2,000.00
$0.00
January
February
March
Plumbing
Electrical
Tools

	A	B	C
3			Candell Hardw
4			Quarterly Inco
5			
6		**January**	**Februa**
7	**Plumbing**	$3,567.58	$4,511.1
8	**Electrical**	$5,991.23	$6,654.3
9	**Tools**	$11,877.65	$15,449.3

Works automatically gives a name to each chart you create. It names the first chart Chart1, the second chart Chart2, and so on. To help you remember the information a particular chart conveys, you can give it a more descriptive name.

To view an existing chart

▶ From the Charts menu, choose the name of the chart you want to view.

To return to the spreadsheet

▶ From the Window menu, choose the spreadsheet name.

To switch between several windows

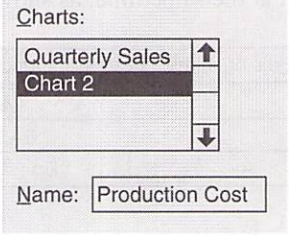
▶ From the Window menu, choose the name of the spreadsheet or chart you want to view.
–or–
Press CTRL+F6 to switch to the next window.

To change a chart's name

1 From the Charts menu, choose Name.

2 In the Charts box, choose the chart you want to rename.

3 In the Name box, type the new name (up to 15 characters).



Name: Production Cost

4 Choose the Rename button.

5 To rename other charts, repeat steps 2 through 4.

6 Choose the OK button.

Changing a chart type

For a tutorial, press SHIFT+F1 and go to the "Charting" lesson in the Spreadsheet and Charting section of the tutorial.

You can change the way Works displays the data in a chart by choosing different chart types: Bar, Line, Pie, Stacked Line, XY (Scatter), or Combination chart.

To change a chart's type

1. Switch to or open the chart you want to change.
2. On the Toolbar, click the chart type button you want.
   –or–
   From the Gallery menu, choose the chart type you want.

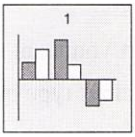
   Works displays several options for the chart type you choose. If you want to view other chart types, choose the Next or Previous button.
3. Choose the chart option you want.
4. Choose the OK button.

The tables on the following pages describe the options for each chart type.

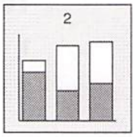
Bar charts

Category definition
A category is a series of values that are all from the same spreadsheet row or column. For example, a category could be the three monthly incomes in a quarterly report.

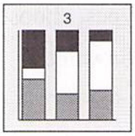
Bar charts compare data by drawing a bar to represent each value in a category. Works draws bars for positive values above the horizontal (X) axis and bars for negative values below the horizontal (X) axis. You can choose from the following Bar chart options:



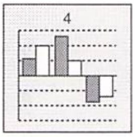
Shows each value in one or more categories as one of a set of bars with the same pattern or color.



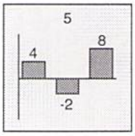
Shows all values in each category as segments stacked in a single bar. The combined segments represent that category's total values.



Shows all values in each category as a percentage, stacked within one bar. Each value is a percentage of the category's 100 percent total.



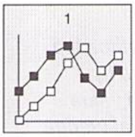
Shows values as in option 1, but draws gridlines for the vertical axis.



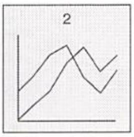
Shows values as in option 1, but inserts labels indicating the actual value each bar represents.

Line charts

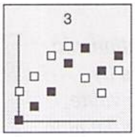
Line charts are valuable for showing trends in categories, especially trends over a period of time. Each value in a category is represented by a marker point on a line. You can choose from the following Line chart options:



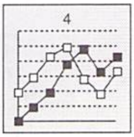
Shows each value in a category as one of a set of identically-shaped markers on a line.



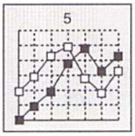
Shows the trend of values in a category as in option 1, but does not use markers on a line.



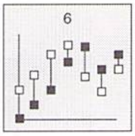
Shows each value in a category as one of a group of identically-shaped markers, but does not connect them with a line.



Shows values as in option 1, but draws horizontal gridlines on the chart.



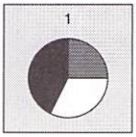
Shows values as in option 1, but draws both horizontal and vertical gridlines on the chart.



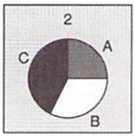
Shows stock market trends by drawing markers on a vertical line to depict the range between high, low, and close values. Each dot on a line represents one value.

Pie charts

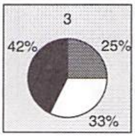
Pie charts show the ratio of the values in a category to their total by drawing wedges in a circle, or pie, to represent each value. A Pie chart can depict only a single value (Y) series. If you highlight more than one column or row from which to plot a Pie chart, Works uses only the first column or row. You can choose from the following Pie chart options:



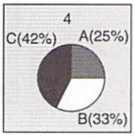
Shows the relationship between values by assigning each value to a proportional wedge in a pie.



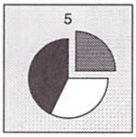
Shows values as in option 1, but adds category labels.



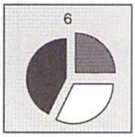
Shows the relationship between values by assigning each value to a wedge in a pie and indicating the percentage of each wedge to the whole.



Shows values as in option 1, but adds both category labels and percentages.



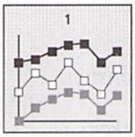
Shows values as in option 1, but explodes the first wedge.



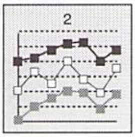
Shows values as in option 1, but explodes all wedges.

Stacked Line charts

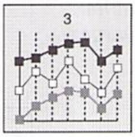
Stacked Line charts show the relationships between the values of several categories and their totals by drawing stacked lines. Each line's values are added to those of the line below. If a number in a line is negative, it causes the line above to drop lower. You can choose from the following Stacked Line chart options:



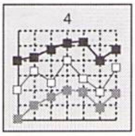
Shows each value in a category as one of a set of identically-shaped markers on a line.



Shows values as in option 1, but draws horizontal gridlines on the chart.



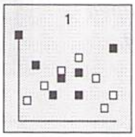
Shows values as in option 1, but draws gridlines for the horizonal axis.



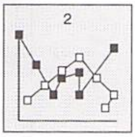
Shows values as in option 1, but draws gridlines for both the vertical and horizontal axes.

XY (Scatter) charts

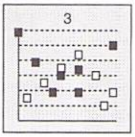
XY charts show relationships between two categories of related data (such as the number of employees and items manufactured) by positioning markers along both the horizontal (X) axis and the vertical (Y) axis. The position of a marker on the horizontal (X) axis represents one value and the position of the same marker on the vertical (Y) axis represents the second value. You can choose from the following XY (Scatter) chart options:



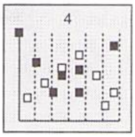
Shows the relationship of two values by positioning a marker so that it indicates a value on both the horizontal (X) axis and the vertical (Y) axis.



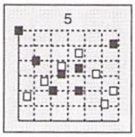
Shows the same relationship as option 1, but draws a line to connect all the markers in the same category.



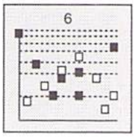
Shows the same relationship as option 1, but adds vertical (Y) axis gridlines to the chart.



Shows the same relationship as option 1, but adds horizontal (X) axis gridlines to the chart.



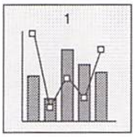
Shows the same relationship as option 1, but adds both vertical and horizontal gridlines to the chart.



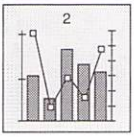
Shows the same relationship as option 1, but uses logarithmic vertical (Y) axis gridlines.

Combination charts

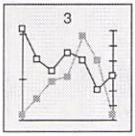
Combination charts mix lines and bars in the same chart, add a second vertical (Y) axis, or do both. Such charts serve the same purpose as Bar or Line charts; however, by varying how they show categories, you can make one or more categories stand out. You can choose from the following Combination chart options:



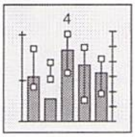
Shows values in the first value (Y) series as bars and values in any other value (Y) series as lines.



Shows values as in option 1, but includes a right vertical (Y) axis for the second category.



Shows values in each value (Y) series as a line and includes a right vertical (Y) axis for the second value (Y) series.

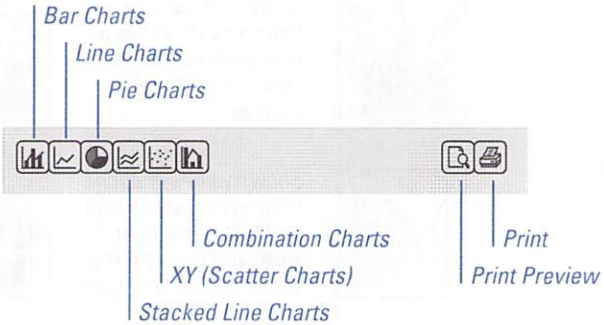


Shows stock market values by drawing markers on a vertical line to represent the range between high, low, and close values. Draws bars to represent the values in a fourth series on a right vertical (Y) axis.

Speeding up your work with the Toolbar

For a tutorial, press SHIFT+F1 and go to "Getting to work" in the Starting with Works section of the tutorial.

The Charting Toolbar provides shortcuts for mouse users. For example, to change a chart's type you only need to click a Toolbar button and then choose the option you want.



The Toolbar also has buttons for previewing how your chart will look when it is printed, and for printing it. The following table shows each button and describes the functions it performs.

Choose	To	Choose	To
📊	Select a Bar chart	⁘	Select an XY (Scatter) chart
📈	Select a Line chart		
◕	Select a Pie chart	📊	Select a Combination chart
≈	Select a Stacked Line chart	🔍	Select Print Preview
		🖶	Print a chart

To quickly change a chart's type

For more information on chart types, see "Changing a chart type" on page 183.

1. Open or switch to the chart you want to change.
2. On the Toolbar, click the button for the chart type you want.

   Works displays a gallery of chart options. If you want to view other chart types, choose the Next or Previous button.
3. From the gallery, choose the option you want.
4. Choose the OK button.

To quickly preview a chart

For more information about using print preview, see "Previewing a chart before printing" on page 215.

1. Open or switch to the chart you want to preview before printing.
2. On the Toolbar, click the Print Preview button.

   Works displays the chart as it will appear on a page when printed.

To quickly print a chart

For more information about printing, see "Printing a chart" on page 220.

1. Open or switch to the chart you want to print.
2. On the Toolbar, click the Print button.
3. If you want to print more than one copy of the chart, type a new number in the Number Of Copies box.
4. Choose the OK button.

Creating a chart from values that are not adjacent

For more information on adding data to an existing chart, see "Adding and deleting chart values" on page 193.

In some cases, the values from which you want to plot a chart are not adjacent and so cannot be highlighted together. When this is the case, Works cannot plot all the values and create the necessary series in one step. However, you can still create a chart that contains all the information you want by plotting it in several steps.

To create a chart from nonadjacent values

1 Highlight any adjacent rows or columns you want included in the chart.

2 On the Toolbar, click the chart button.
–or–
From the Charts menu, choose Create New Chart.

Works plots and creates a Bar chart from the highlighted text and values. With the basic chart created, you can now add other series from the nonadjacent ranges.

3 From the Edit menu, choose Series.

4 Choose the first empty series box, either a value (Y) series box or the Category (X) Series box.

5 In the series box, type a reference for the range of cells you want to plot the new series from.

Example: Type **D5:G5**

6 Repeat steps 4 and 5 for any additional series you want to plot.

Example: Type **D10:G10** in another series box.

7 Choose the OK button.

Works plots the new series and adds them to the chart. The following table suggests ways you can further modify the chart:

To	See page
Change a chart's type	183
Add titles, labels, and a legend	198, 199, 201, and 204
Change fonts, font sizes, and font styles	206
Change colors and patterns	207
Add gridlines and borders, or change markers	209

Another way to insert a range reference
You can also copy range references to add a series to a chart. For more information, see "Adding and deleting chart values"on page 193.

Adding and deleting chart values

Creating a chart from non-adjacent ranges
If the ranges of values and text from which you want to create a chart are not adjacent, you cannot highlight them all when you first create the chart. For information on creating a chart from nonadjacent ranges, see "Creating a chart from values that are not adjacent" on page 192.

After you have created a chart, you can add, change, or delete the rows or columns used for the category (X) series and any value (Y) series.

To make changes easier, Works can help you locate the spreadsheet cells it used when plotting a specific category (X) series or value (Y) series.

To find the spreadsheet cells used in a chart

1. Open or switch to the chart for which you want to locate a series.
2. From the Edit menu, choose Go To.
   –or–
   Press F5.

   Works displays a list of the chart's value (Y) series and the category (X) series.
3. Choose the series you want to locate.
4. Choose the OK button.

   Works switches to the spreadsheet and highlights each cell used for the series you chose. You can now make changes or edit any values or text, and Works will change the chart accordingly.

To add or change a series

1. In the spreadsheet, highlight the range of cells you want Works to plot as a value (Y) series or category (X) series.
2. From the Edit menu, choose Copy.
   –or–
   Press CTRL+INS.
3. Open or switch to the chart you want to change.
4. From the Edit menu, choose Paste Series.

   Works displays a list of the chart's value (Y) series and the category (X) series.
5. Choose the series you want to plot data for.
6. Choose the OK button.

   Works plots the new data and displays the revised chart.

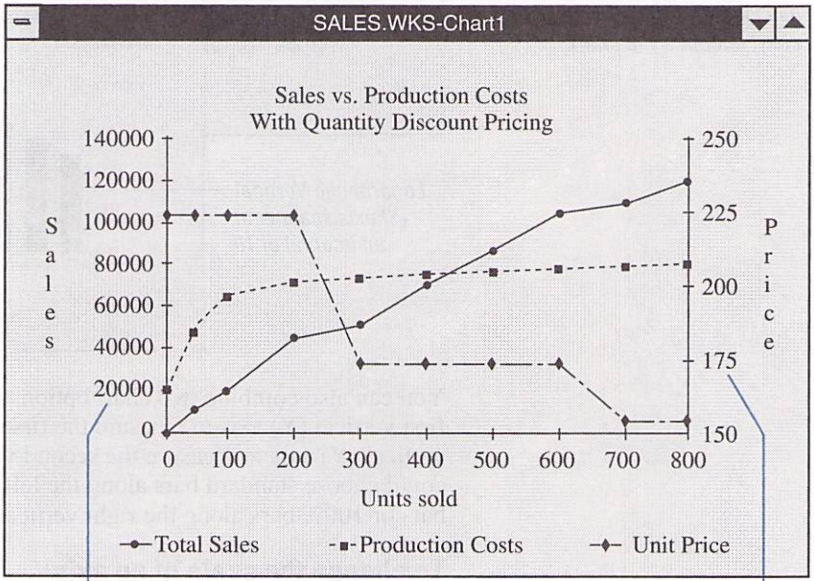
To delete a series

1. Open or switch to the chart you want to change.
2. From the Edit menu, choose Series.
3. Highlight the contents of the box for the value (Y) series or category (X) series you want to delete.
4. Press DEL.
5. To delete other series, repeat steps 3 through 4.
6. Choose the OK button.

Adding and deleting axes, and changing scales

What is a scale?
A scale is a set of numbered marks measuring values along an axis. Each scale has a minimum, a maximum, and an interval between each mark. When you create a chart, Works automatically determines an appropriate scale for the values along the axis.

You can change the emphasis of a chart by changing the minimum, maximum, or interval values of a chart's scale, and you can sometimes make a chart easier to understand by adding a second vertical (Y) axis. The second axis can have the same or different scale intervals.

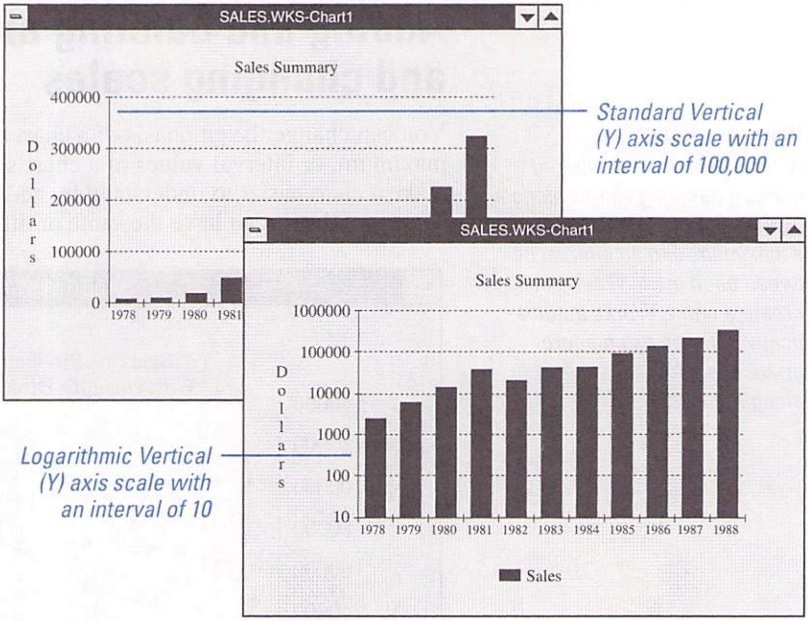

SALES.WKS-Chart1
Sales vs. Production Costs
With Quantity Discount Pricing
Sales
140000
120000
100000
80000
60000
40000
20000
0
Price
250
225
200
175
150
0
100
200
300
400
500
600
700
800
Units sold
Total Sales
Production Costs
Unit Price

The left vertical (Y) axis measures total sales.

The right vertical (Y) axis, with an expanded scale, measures unit price.

Works can also plot a chart using logarithmic scales. Logarithmic scales are useful when the range of data values is very large or when you want to show a logarithmic relationship.

Standard and logarithmic scales
With a standard scale, Works adds a specific value to each interval in order to determine the value of the next interval. With a logarithmic scale, Works multiplies each interval by a specific value to determine the value of the next interval. You can use logarithmic scales in any chart except a Pie chart.


SALES.WKS-Chart1
Sales Summary
400000
300000
200000
100000
0
Dollars
1978
1979
1980
1981
SALES.WKS-Chart1
Sales Summary
1000000
100000
10000
1000
100
10
Dollars
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
Sales

Standard Vertical (Y) axis scale with an interval of 100,000

Logarithmic Vertical (Y) axis scale with an interval of 10

You can also combine two chart options in one chart by using the first vertical (Y) axis to measure the first value (Y) series and the second vertical (Y) axis to measure the second value (Y) series. For example, you could choose standard bars along the left vertical (Y) axis and stacked bars or 100% bars along the right vertical (Y) axis.

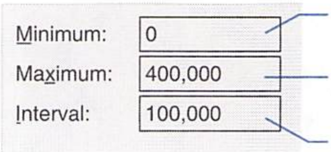
To change the scale of an axis

Changing a horizontal axis scale
You can change the scale of a vertical (Y) axis in any Bar or Line chart, but you can only change the scale of a horizontal (X) axis only in an XY (Scatter) chart.

1 Open or switch to the chart you want to change.

2 From the Format menu, choose the command for the vertical axis you want to change: Vertical (Y) Axis or Right Vertical Axis.

3 Type new values in the Maximum, Minimum, or Interval boxes.
–or–
If you want Works to set the value, type **auto** in the appropriate box.


Minimum: 0
Maximum: 400,000
Interval: 100,000

Minimum sets the lowest value that Works will show on a chart.

Maximum sets the highest value that Works will show on a chart.

Interval defines the value measured by each axis mark.

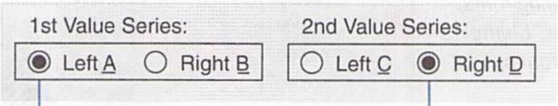
4 To use a logarithmic scale, choose Use Logarithmic Scale.

5 Choose the OK button.

To add or remove a right vertical axis

1 From the Format menu, choose Two Vertical (Y) Axes.

2 Choose the Right option button for at least one of the value (Y) series to add a right vertical (Y) axis.
–or–
Choose the Left option button for each value (Y) series for which you want to remove a right vertical (Y) axis.



1st Value Series: ● Left A ○ Right B

2nd Value Series: ○ Left C ● Right D

Creates a left vertical (Y) axis scale for the first value (Y) series.

Creates a right vertical (Y) axis for the second value (Y) series.

3 Choose the OK button.

To combine chart types when you have a right vertical axis

1 From the Format menu, choose the command for the vertical axis that you want to change the chart type for: Vertical (Y) Axis or Right Vertical Axis.

2 If you want, choose either the Normal, Stacked, 100%, or Hi-Lo option button for either the left or right vertical (Y) axis.

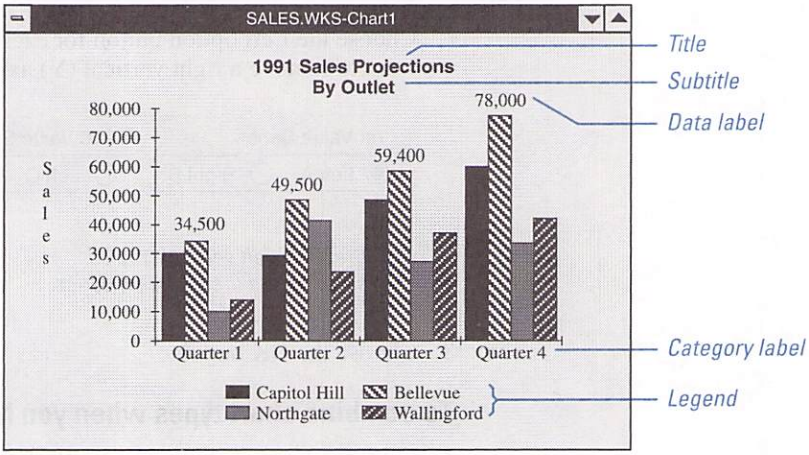
3 Choose the OK button.

Adding and deleting chart titles

Titles, labels, and a legend can make your charts more attractive and easier to read.

Making labels fit

The characters in some fonts are more compressed than in others. If chart labels overlap and are hard to read, try changing fonts, font sizes, or both. See "Changing fonts , font sizes, and font styles" on page 206.



Choose different fonts, font sizes, and styles to describe and emphasize information in your charts.

To add a chart title

1. Switch to or open the chart you want to add a title to.
2. Type a title in any or all the title boxes.
   –or–
   Type a reference to the spreadsheet cell that contains the text or values you want to use as a title.

   Example: If the text for the title is in spreadsheet cell A1, type **a1**
3. Choose the OK button.

To delete a chart title

1. Switch to or open the chart you want to change.
2. From the Edit menu, choose Titles.
3. Highlight the contents of the box for the title you want to delete.
4. Press DEL.
5. Repeat steps 3 and 4 to delete other titles.
6. Choose the OK button.

Adding and changing category labels

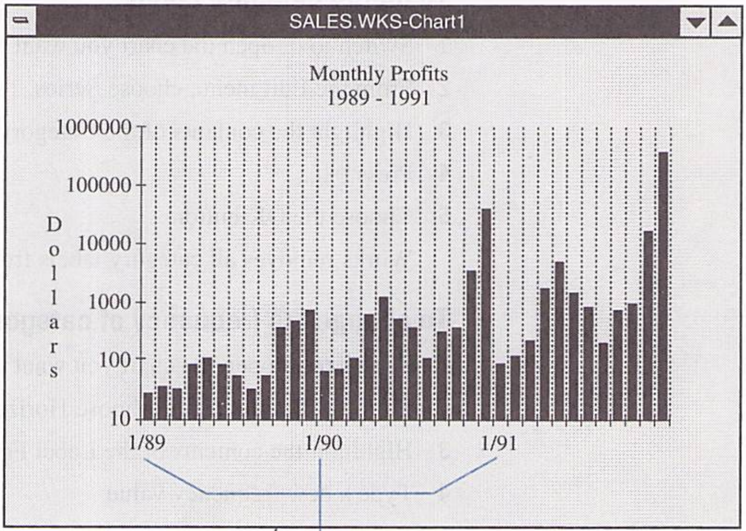
Category labels are words or numbers that identify information in a chart. For example, category labels might be:

Category labels can save space
If there is no room on a chart to include a label for each category, you might want to include only the label for every second category.

- The names of months or month numbers (such as 1 for January, 2 for February, and so on).
- Income categories (such as Electrical, Plumbing, and Tools).
- Student or client names.
- Numbers, such as the numbers of a series of math tests.

You can add category labels to charts that do not have them, and you can delete existing labels. You can also change the frequency of category labels.

This 36-month chart labels only January of each year.


SALES.WKS-Chart1
Monthly Profits
1989 - 1991
1000000
100000
10000
1000
100
10
Dollars
1/89
1/90
1/91

Category labels with a frequency of 12

To add or edit category labels

1. If the text or numbers you want to use for category labels do not already exist in the spreadsheet, enter them.
2. Highlight the text or numbers you want to use for category labels.
3. From the Edit menu, choose Copy.
   –or–
   Press CTRL+INS.
4. Switch to or open the chart you want to change.
5. From the Edit menu, choose Paste Series.
6. Choose the Category option button.
7. Choose the OK button.

   Works changes the category labels on your chart.

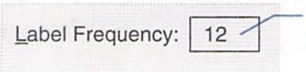
To delete category labels

1. Switch to or open the chart you want to change.
2. From the Edit menu, choose Series.
3. Highlight the contents of the Category (X) Series box.
4. Press DEL.
5. Choose the OK button.

   Works removes all category labels from the chart.

To change the frequency of category labels

1. Switch to or open the chart you want to change.
2. From the Format menu, choose Horizontal (X) Axis.
3. Highlight the contents of the Label Frequency box.
4. Type a new frequency value.



Label Frequency: 12

If you type 12, Works displays labels at every twelfth point on the horizontal (X) axis.

5. Choose the OK button.
6. Works adjusts the frequency and displays the chart.

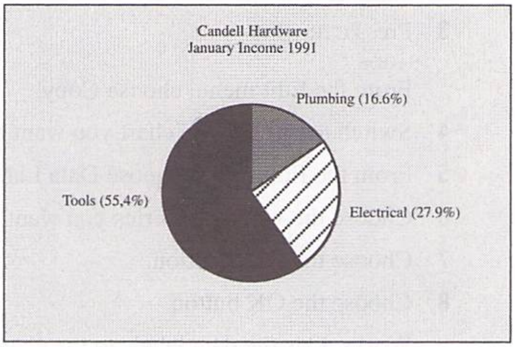
Adding and deleting data labels

Data labels for Bar and Line charts show the spreadsheet values from which a category is calculated. When Works inserts data labels into a chart, it places them next to their plotted point.

For Pie charts, you can insert two different types of labels for each slice. When Works plots the chart, it includes a value or text for each of the two methods you choose. The labels you can choose for a Pie chart are:

Label type	What it shows
Values	The value each slice was plotted from
Percentages	The percentage of the total each slice represents
Cell Contents	The contents of any range of cells you specify
1, 2, 3	Sequential numbers for each pie slice
None	No label

Using two kinds of data labels
This illustration shows how Works displays a Pie chart using cell contents for the first label and percentages for the second label.



To add data labels to Pie charts

Another way to insert a range reference in the Cell Range box
To copy a range reference into the Cell Range box, first highlight the spreadsheet range you want to insert, and then press CTRL+INS before switching to the chart and choosing the Data Labels command. In the Data Labels dialog box, choose the Cell Range box, then choose the Paste button.

1 Switch to or open the Pie chart you want to add data labels to.
2 From the Edit menu, choose Data Labels.
3 Under either 1st Label, 2nd Label, or both, choose an option.
4 If you choose the Cell Contents option button, then in the Cell Range box, type the spreadsheet range you want to use.
5 Choose the OK button.

To delete data labels in a Pie chart

1. Switch to or open the Pie chart you want to change.
2. From the Edit menu, choose Data Labels.
3. Under either 1st Label, 2nd Label, or both, choose the None option button.
4. Choose the OK button.

To use any spreadsheet text or values as data labels in a Line or Bar chart

1. If you have not already done so, enter any text or values into the spreadsheet that you want Works to use as data labels.

   If you plan to use the spreadsheet values from which Works plotted the chart as data labels, you do not need to enter text in the spreadsheet. Instead, go on to the next procedure.
2. Highlight the spreadsheet information you want to use for data labels.
3. Press CTRL+INS.
   –or–
   From the Edit menu, choose Copy.
4. Switch to or open the chart you want to add data labels to.
5. From the Edit menu, choose Data Labels.
6. Choose the value (Y) series you want to label.
7. Choose the Paste button.
8. Choose the OK button.

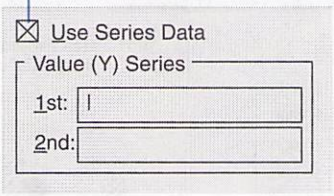
   Works adds the data labels to the chart.

To use a Bar or Line chart's plotted values as data labels

1 Switch to or open the chart you want to change.

2 From the Edit menu, choose Data Labels.

3 In the Data Labels dialog box, choose the Use Series Data check box.



If you turn on the Use Series Data option, Works uses the chart's plotted values as data labels.

4 Choose the OK button.

To delete data labels in a Line or Bar chart

1 Switch to or open the chart you want to change.

2 From the Edit menu, choose Data Labels.

3 Under Value Y Series highlight the contents of the value (Y) series box you want to delete.

–or–

If the Use Series Data check box is turned on, choose it again to turn it off.

4 Press DEL.

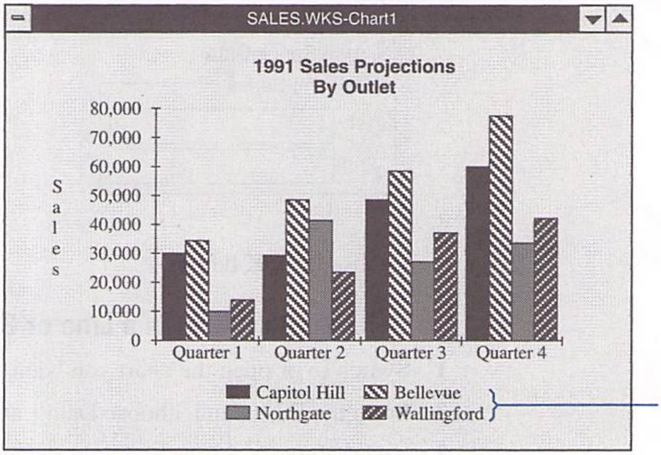
5 Repeat steps 3 and 4 to delete other data labels.

6 Choose the OK button.

Adding, changing, and deleting a legend

A legend in a chart is like a legend on a map; it tells you what the colors, patterns, and markers mean. If the range you highlight when you create a new chart contains column or row labels, Works automatically uses that text to create a legend. You can later add other markers to the legend, or you can delete legend markers.

Labeling pie slices
Pie charts cannot have a legend. For information on labeling pie slices, see "Adding and changing category labels" on page 199.


SALES.WKS-Chart1
1991 Sales Projections
By Outlet
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Sales
Quarter 1
Quarter 2
Quarter 3
Quarter 4
■ Capitol Hill
▧ Bellevue
■ Northgate
▨ Wallingford

Legend

To add or change a legend marker

Another way to add legends
You can also type the text or values you want to use as legends in a value series box in the Legend dialog box.

1 If you have not already done so, enter any text or values you want to use as legends into the spreadsheet.

Example: In cell A1, type **Kirkland**

2 Switch to or open the chart you want to change.

3 From the Edit menu, choose Legend.

4 Choose the value (Y) series you want to add to the legend.

5 Type a reference to the spreadsheet cell containing the text or values you want to use for the legend marker.

Example: Type **a1**
–or–
Type the legend.

Legends can be up to 19 characters long.

6 Choose the OK button.

To delete a legend marker

1. Switch to or open the chart you want to change.
2. From the Edit menu, choose Legend.
3. Highlight the contents of the box for the value (Y) series you want to delete from the legend.
4. Press DEL.
5. Repeat steps 3 and 4 to delete other legend markers.
6. Choose the OK button.

To show or hide a chart's legend

▶ From the Format menu, choose Show Legend.

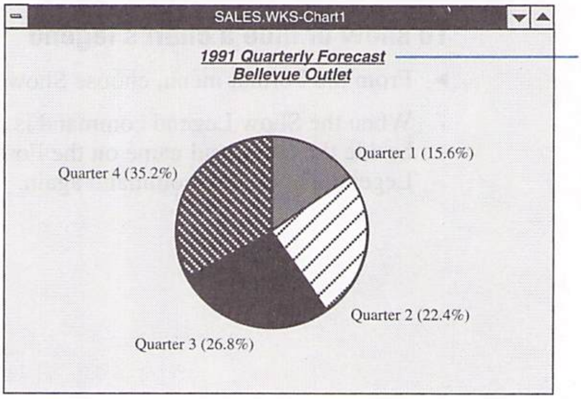
When the Show Legend command is chosen, a mark is displayed beside the command name on the Format menu. To turn off Show Legend, choose the command again.

Changing fonts, font sizes, and font styles

Printer fonts
The fonts you can use depend on your printer. Works displays your active printer's available fonts when you choose the Title Font or Other Font command from the Format menu.

A font, or typeface, is a specific design of characters. Each font has one or more sizes and can have one or more styles (plain, bold, italic, or underline).

Changing fonts, font sizes, and font styles changes the way Works displays characters in a chart and the way it prints them. You can change the fonts, font sizes, and styles for chart titles and for all other text.



You can make text bold, italic, and underlined, and you can change a font's size.

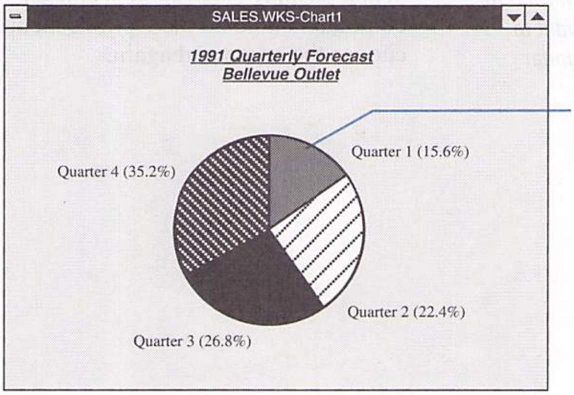
To change font, font size, and font style for text and values

For more information on adding titles to a chart, see " Adding and deleting chart titles" on page 198.

1. Switch to or open the chart you want to change.
2. From the Format menu, choose:
   - Title Font to change the chart title.
   - Other Font to change all text in the chart except the title.
3. Choose any combination of font, font size, and font style you want.
4. Choose the OK button.

Changing colors and patterns

When you create a chart, Works assigns it a set of colors and patterns. You can modify the chart by choosing different colors, patterns, or both. If your printer cannot print in color, you can display the chart in black and white before you print it to see how it will look.



Changing colors and patterns can make categories stand out.

To change colors and patterns in a Bar or Pie chart

1 Switch to or open the chart you want to change.

2 From the Format menu, choose Patterns & Colors.

3 Under Series choose the value (Y) series or the pie slice you want to change.

4 Under Colors, choose the color you want.
–or–
Choose Auto to have Works choose the color for you.

5 Under Patterns, choose the pattern you want.
–or–
Choose Auto to have Works choose a pattern for you.

6 Choose the Format button to confirm your changes for the series or pie slice you chose.
–or–
Choose the Format All button to confirm the changes for all the value (Y) series or pie slices in the chart.

7 Repeat steps 3 through 7 to change the color or pattern for another value (Y) series or pie slice.

8 Choose the Close button.

Works changes your chart to reflect your choices.

To display a chart as it will print with a black-and-white printer

What if you don't format for black and white before printing? *Works automatically formats your charts for the printer you are using. You only need to format for black and white if you want to view how a chart will appear before printing.*

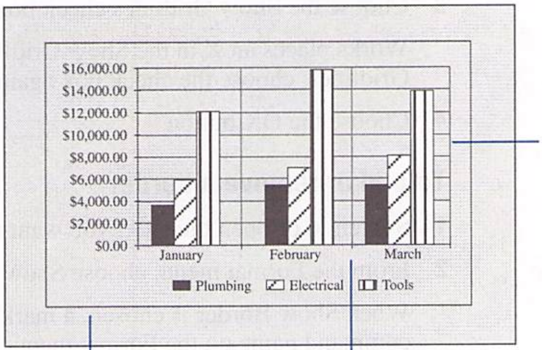
- ▶ From the Options menu, choose Display As Printed.

Unless your active printer is a color printer, Works now displays the chart in patterns of black and white rather than colors.

When Display As Printed is chosen, a mark is displayed beside the command name on the Options menu. To turn off Display As Printed, choose the command again.

Adding gridlines and borders, and changing marker shapes

You can make some charts more attractive and easier to read by adding gridlines and borders.



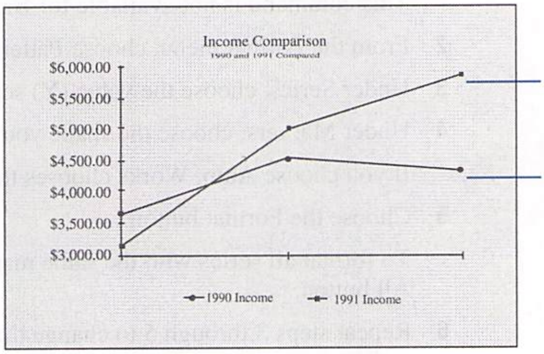
Horizontal gridline

Border

Vertical gridline

Choosing chart options
The options available to you depend on the chart type. For example, marker options are not available for Bar or Pie charts.

You can also make Line charts easier to understand by using different shaped markers to indicate which lines are assigned to which series.



The square marker shows 1991 Income

The circular marker shows 1990 Income

To add or remove gridlines

1. Switch to or open the chart you want to change.
2. From the Format menu, choose the axis for which you want to add or remove gridlines: Horizontal(X) Axis, Vertical (Y) Axis, or Right Vertical (Y) Axis.
3. Choose the Show Gridlines check box.

   Works places an X in the Show Gridlines check box. To turn off Show Gridlines, choose the check box again.
4. Choose the OK button.

To add or remove a border

1. Switch to or open the chart you want to change.
2. From the Format menu, choose Show Border.

   When Show Border is chosen, a mark is displayed beside the command name on the Format menu. To turn off Show Border, choose the command again.

To change marker shapes

1. Switch to or open the chart you want to change.

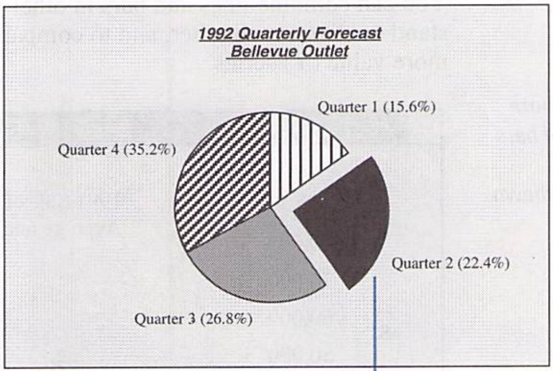
   This command is not available for Bar or Pie charts.
2. From the Format menu, choose Patterns & Colors.
3. Under Series, choose the value (Y) series you want to change.
4. Under Markers, choose the shape you want.

   If you choose Auto, Works chooses the marker shape for you.
5. Choose the Format button.

   To format all series with the same marker shape, choose the Format All button.
6. Repeat steps 3 through 5 to change the markers of other value (Y) series.
7. Choose the Close button.

Exploding a pie slice

When you want to draw attention to a particular category in a Pie chart, you can explode that slice.



When you explode a slice, Works separates it from the rest of the categories in a pie chart.

To explode a pie slice

Which slice is which?
To find out which slice in your pie is number 1, number 2, and so on, choose the 2 option in the Pie gallery.

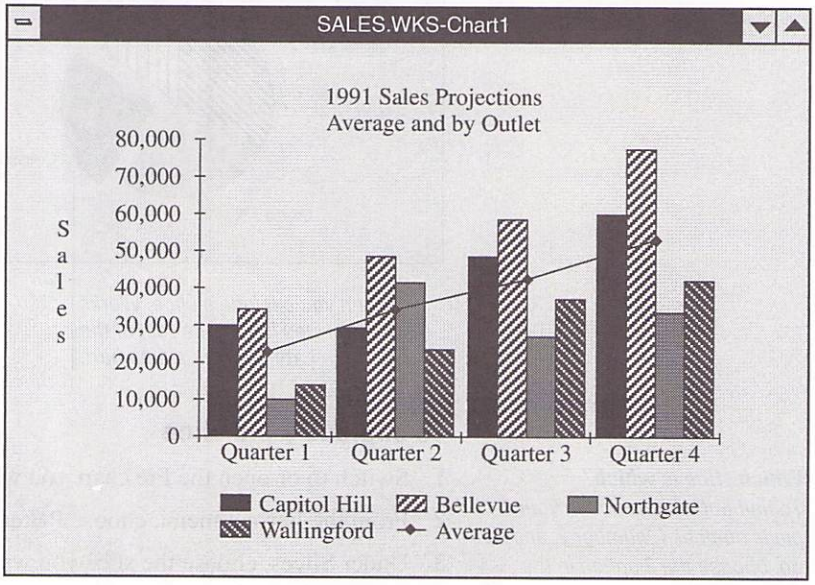
1. Switch to or open the Pie chart you want to change.
2. From the Format menu, choose Patterns & Colors.
3. Under Slices, choose the slice you want to explode.
4. Choose the Explode Slice check box.
5. Choose the Format button to format the slice.
   –or–
   Choose the Format All button to explode all the pie slices.
6. If you want to explode other slices, repeat steps 3 through 5.
7. Choose the Close button.

Mixing lines and bars in a single chart

Works has several built-in charts that combine bars and lines in a single chart. For more information, see "Combination charts" on page 189.

You can combine lines and bars in other ways to make value (Y) series stand out from each other, and to compare the relationships among two or more value (Y) series.

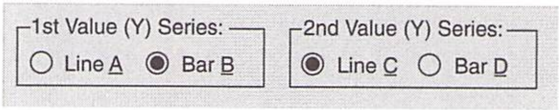
Combine charts to show more
You can combine lines and bars to show both values and averages in one chart as shown in the illustration.


SALES.WKS-Chart1
1991 Sales Projections
Average and by Outlet
Sales
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Quarter 1
Quarter 2
Quarter 3
Quarter 4
Capitol Hill
Bellevue
Northgate
Wallingford
Average

To combine lines and bars

1. Switch to or open the chart you want to change.

   Combining lines and bars cannot be done with Pie charts.
2. From the Format menu, choose Mixed Line & Bar.
3. Choose the Line or Bar option button for each value (Y) series you want Works to display differently.



1st Value (Y) Series: ○ Line A ● Bar B

2nd Value (Y) Series: ● Line C ○ Bar D

In this example, Works will display the first value (Y) series as bars and the second value (Y) series as a line.

4. Choose the OK button.

To change back to a Bar or Line chart

1. From the Format menu, choose Mixed Line & Bar.
2. To change to a Bar chart, choose the Bar option button for each value (Y) series.

   –or–

   To change to a Line chart, choose the Line option button for each value (Y) series.
3. Choose the OK button.

Deleting and duplicating a chart

If you need more than eight charts for one spreadsheet
If you need to create more than eight charts, you can make a duplicate of the spreadsheet using the Save As command from the File menu and then create new charts for it.

Because you can create a maximum of eight charts for any one spreadsheet, you might need to delete one or more charts in order to create a new chart. You might also want to delete charts to reduce the size of a spreadsheet.

You can also duplicate an existing chart and then modify that copy. For example, you could duplicate a chart to experiment with format changes or to create a series of charts present the same data with different emphasis.

To delete a chart

1. From the Charts menu, choose Delete.

   Works displays a list of all the charts for the active spreadsheet.
2. Choose the chart you want to delete.
3. Choose the Delete button.

   Works deletes the chart and removes its name from the Charts menu.
4. If you want to delete another chart, repeat steps 2 and 3.
5. Choose the OK button.

To duplicate a chart

1. From the Charts menu, choose Duplicate.

   Works displays a list of all the charts for the active spreadsheet.
2. Under Charts, choose the chart to duplicate.
3. In the Name box, type a name (up to 15 characters) for the copy of the chart.

   Example: Type **Quarterly Sales**
4. Choose the Duplicate button.

   Works duplicates the chart and puts the name you gave it on the Charts menu.
5. If you want to duplicate another chart, repeat steps 2 through 4.
6. Choose the OK button.

Previewing a chart before printing

Works Print Preview command lets you look at a chart as it will appear when you print it. By viewing your chart in this way, you can often find mistakes and make corrections before printing.

In print preview, you can preview a chart in three ways:

- In the standard view, Works scales down each page, and you can see the entire page, including any headers and footers.
- In half-zoom view, Works displays the text and objects approximately one-half the size that they appear in the document window.
- In full-zoom view, Works displays the text and objects approximately the same size that they appear in the document window.

If you change the window size
The actual size Works displays a chart and its contents in the various zoom views depends on the size of the print preview window. If you make the window smaller, Works scales down the chart and its contents.

To preview a chart

▶ On the Toolbar, click the Print Preview button.

Print Preview button

–or–

From the File menu, choose Print Preview.

Viewing your chart

In print preview, you can view all your chart, you can zoom (enlarge) the chart in order to see more detail, and you can scroll a zoomed chart in order to see any portion of it. The following table describes how to zoom in and view a chart.

To	With the mouse	On the keyboard
Zoom in to the next zoom level (half-zoom or full-zoom)	Click the page –or– Click the Zoom In button	Press ALT+I
Zoom in to full-zoom from standard view	Double-click the page	Press ALT+I twice
Zoom out to the previous level (half-zoom or standard view)	Click the Zoom Out button –or– Click the page	Press ALT+O
Zoom out to standard view from full-zoom	Double-click the page	Press ALT+O twice
View other parts of a zoomed chart	Click the scroll bar –or– Drag the scroll box	Press the appropriate arrow key to scroll up, down, right, or left
Return to the chart window	Click the Cancel button	Press ESC

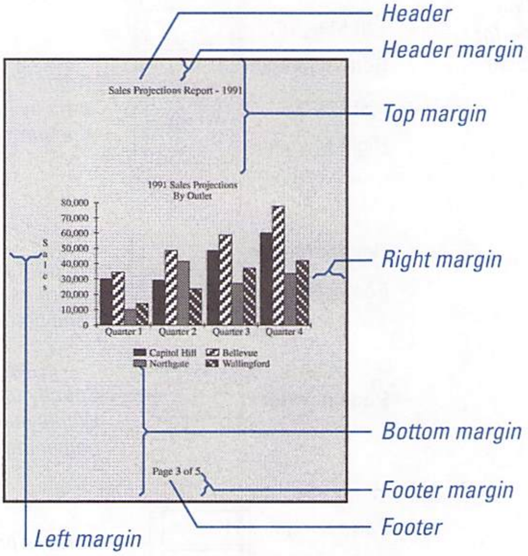
To print a chart from Print Preview

▶ Click the Print button.
–or–
Press CTRL+P.

Changing page and margin settings

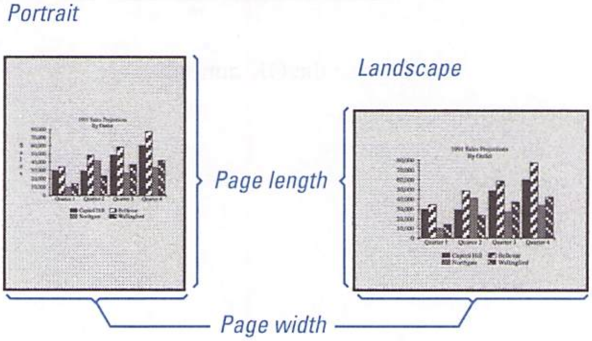
For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Spreadsheet and Charting section of the tutorial.

Page and margin settings determine how Works prints your chart on a page. For example, you can change page margins to make room for headers and footers or to make your page more attractive.


Header
Header margin
Sales Projections Report - 1991
Top margin
1991 Sales Projections
By Outlet
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Sales
Quarter 1
Quarter 2
Quarter 3
Quarter 4
Capitol Hill
Bellevue
Northgate
Wallingford
Right margin
Bottom margin
Page 3 of 5
Footer margin
Footer
Left margin

When you change margin settings, Works remembers the settings.

You can change page size settings. Works is preset to print on letter-size (8.5-by-11-inch) paper but, if you use a different-sized paper you can change the page size to match. For example, you could print on legal-sized paper by entering a page length of 14 inches. You can also choose to print a chart in landscape orientation.

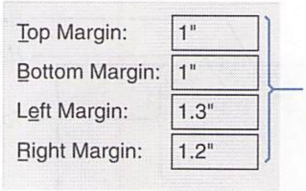

Portrait
Landscape
Page length
Page width

To change page setup and margin settings

Changing measurement units
You can change the unit of measurement when typing margin or page size values by including the appropriate abbreviation—for example: 0.5in for inches, 1.26cm for centimeters, 3pi for picas, or 37pt for points.

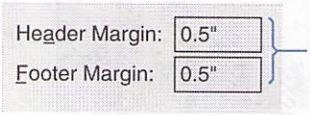
1 From the File menu, choose Page Setup & Margins.

2 Type new measurements for any settings you want to change, and choose the option you want to use.



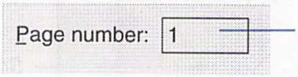
Top Margin: 1"
Bottom Margin: 1"
Left Margin: 1.3"
Right Margin: 1.2"

Adjust the size of a page's print area by increasing or decreasing the margin size.



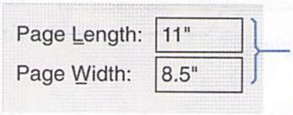
Header Margin: 0.5"
Footer Margin: 0.5"

To print properly, header and footer margins must be smaller than the top and bottom page margins.



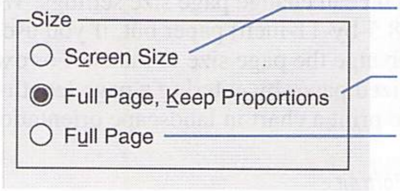
Page number: 1

Specify the starting page number. Works numbers the pages sequentially, beginning with the number you specify.



Page Length: 11"
Page Width: 8.5"

Works is preset to print on 8.5-by-11-inch paper. Change the page measurements if you use different size paper.



Size
○ Screen Size
● Full Page, Keep Proportions
○ Full Page

Prints the chart the size it is displayed on the screen.

Scales the chart to fill the page, changing its width-to-height ratio as needed.

Scales the chart to fill the page, but retains its width-to-height ratio.

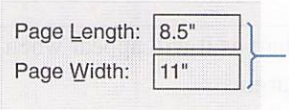
3 Choose the OK button.

To change the page orientation

Will your printer print sideways? *Not every printer can print in landscape orientation. For information about your printer, check you printer documentation.*

1 From the File menu, choose Page Setup & Margins.

2 In the Page Length and Page Width boxes, reverse the measurements.



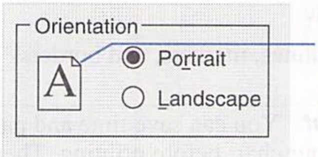
Page Length: 8.5"
Page Width: 11"

For landscape orientation, reverse the normal portrait measurements.

3 Choose the OK button.

4 From the File menu, choose Printer Setup.

5 Choose either the Portrait or Landscape option button.



Orientation
● Portrait
○ Landscape

In Portrait orientation, pages are longer than they are wide. In Landscape orientation, pages are wider than they are long.

6 Choose OK to close the Printer Setup dialog box.

Works will now print your chart in the orientation you choose.

Printing a chart

For a tutorial,press SHIFT+F1 and go to the "Page layout and printing" lesson in the "Spreadsheet and Charting" section of the tutorial.

Printing several charts on a page
To print more than one chart on a page or to print charts in different sizes, copy the chart or charts into a Word Processor document. In the Word Processor, you can arrange the charts the way you want them and you can make them any size. For more information, see "Adding charts, drawings, and other objects" on page 31.

Before printing, you should make sure your chart is designed the way you want it. The following table suggests options to check:

To	See page
View the chart as it will appear when printed	215
Set page margins	217
Change fonts, font sizes, and styles	206
Specify headers and footers	154
Add or delete chart titles, labels, and legends	198, 199, 201, and 204
Change colors and patterns or display a chart in black and white	207 and 208
Add gridlines, markers, and borders	209

Important You can save time and paper if you use print preview to check your chart before printing. Then, if necessary, adjust page margins, size, orientation, and so on. For information about all page and margin options, see "Changing page and margins settings" on page 217.

To print a chart

1 On the Toolbar, click the Print button.

Print button

–or–

From the File menu, choose Print.

2 To print more than one copy of the active chart, type the number of copies you want in the Number Of Copies box.

3 Choose the OK button.

Guide to the Database

For a tutorial, press SHIFT+F1 and go to the Database section of the tutorial.

WorksWizards can help
The WorksWizards Address Book helps you keep track of the addresses of your clients, friends, teammates, or family. You can use the names in the address book for printing form letters or mailing labels. For more information about WorksWizards, see "Team up with a Wizard" in Getting Started.

With the Microsoft Works for Windows Database, you can create an efficient filing system to help you organize customer records, your company mailing list, household inventory, or your list of favorite compact discs. You can include up to 32,000 records in a Works database, and you can sort these records alphabetically, select only a few of them to print mailing labels or form letters, or make notes about each person in your database.

If you are new to Works or to databases in general, you don't have to learn everything in order to create your first database. Doing the Database section of the online tutorial and reading the topics listed in the following table, should tell you what you need to know to get started.

To	See	On page
Create a form for information	Beginning a database	222
	Designing a database form	224
Type information about a person or item	Entering information	228
Edit information	Making changes to a field entry	249
Look at your database before printing it	Previewing a database	295
Print a database	Printing a database	300

Beginning a database

For a tutorial, press SHIFT +F1 and go to the "Introducing the Database" lesson and to the "Creating a database" lesson in the Database section of the tutorial.

Before starting Works for the first time, you must install it on your computer. For information on how to install and start Works, and how to create a spreadsheet, see "Installing Works on your computer" in *Getting Started.*

You can begin a new database when you start Works or at any time while you are using Works. You can also open a previously created database anytime while you are using Works.

To start Works and create a new database or open a previously saved database

To quickly display the Startup dialog box
You can also display the Works Startup dialog box by double clicking anywhere in the Works workspace. The workspace is the area behind document windows.

1 In the Solution Series group window, double-click the Microsoft Works program item.

Works displays the Startup dialog box.

2 Choose the Database button to create a new database.
–or–
Choose the Open Existing File button to open a previously saved database.

To create a new database when Works is already started

1 From the File menu, choose Create New File.

Works displays the Create New File dialog box.

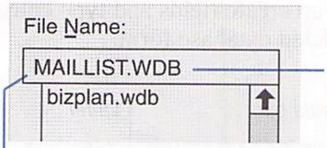
2 Choose the Database button to create a new database.

A new database opens, and you can begin creating your database.

To open an existing database when Works is already started

For information on opening and using a sample accounts receivable database, which comes with Works, see "Jump right in" in *Getting Started.*

1 From the File menu, choose Open Existing File.



The filename extension indicates the document type, such as .WDB for Database.

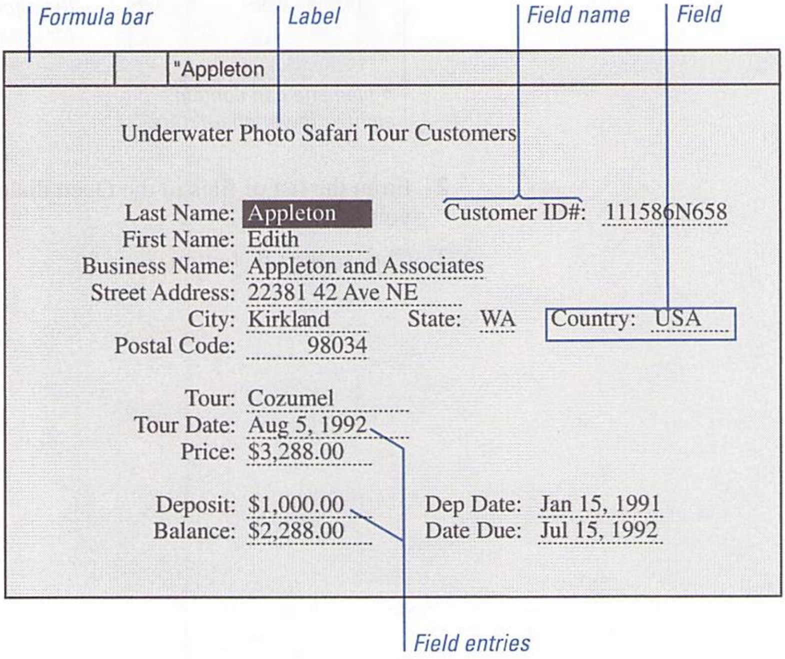
A filename can contain eight or fewer characters.

2 From the list of files in the Open dialog box, choose the database you want.

3 Choose the OK button.

Designing a database form

When you open a new database, Works automatically displays form view, where you create fields and type entries. The following illustration shows a completed database form.



"Appleton

Underwater Photo Safari Tour Customers

Last Name: Appleton
First Name: Edith
Business Name: Appleton and Associates
Street Address: 22381 42 Ave NE
City: Kirkland
State: WA
Country: USA
Postal Code: 98034
Customer ID#: 111586N658

Tour: Cozumel
Tour Date: Aug 5, 1992
Price: $3,288.00

Deposit: $1,000.00
Balance: $2,288.00
Dep Date: Jan 15, 1991
Date Due: Jul 15, 1992

Information in your database is divided into records and fields. Record is the name given to all the information in a database about one person, one product, or one event.

Form view displays your database one record at a time, much as you would see the information if you were working with printed forms, index cards, or a Rolodex.

Each item in a record—a name, a street address, a state, a postal code —is contained in its own field; when you have a group of records, each type of information (such as last names) is located in the same field in each record.

A field consists of a field name and the information you type into the field, called the field entry.

Planning your fields

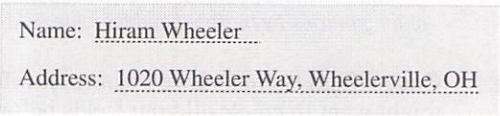
You have several options when you create a database form. For example, you can:

- Design a form to precisely match a printed form.
- Design an invoice or statement to calculate balances, which you can then print and mail to a customer.
- Include titles and other descriptive text, called labels, to help clarify the information on the form or give instructions to someone entering information into the form.

The most important thing to remember when you are setting up a database form is that the fields you set up now affect what you can do with the database later on—whether it's sorting, searching, adding, or deleting records and fields. The more thoughtfully you arrange your form and its fields now, the easier it will be to work with later.

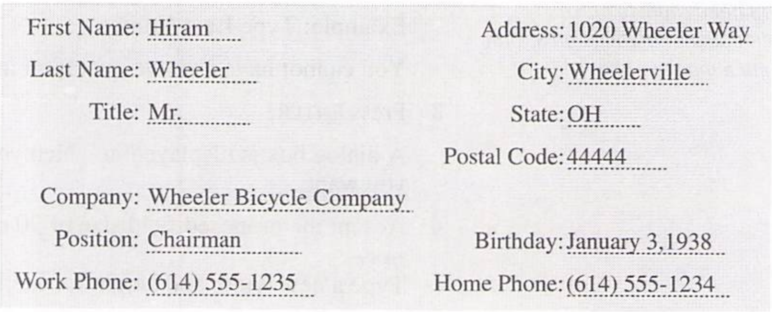
Size limits
You can have up to 256 fields in a database, and each field can have up to 256 characters.

When you start a new database, you first create fields to contain the information you want to organize. For example, if you start an address database in form view, you could set up two fields, Name and Address. Your first record might look something like this:



Name: Hiram Wheeler
Address: 1020 Wheeler Way, Wheelerville, OH

A database like this has room for everyone's name and address, but it's not designed well for searching or sorting. A better way to set up a database like this is to make a separate field for each component that you might want to search for or sort on later.



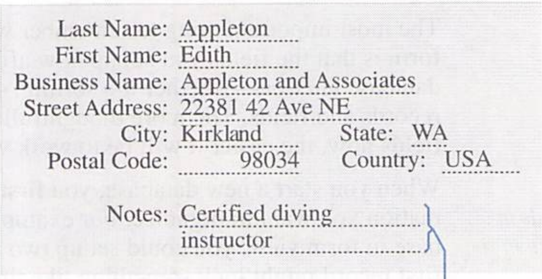
First Name: Hiram
Last Name: Wheeler
Title: Mr.
Address: 1020 Wheeler Way
City: Wheelerville
State: OH
Postal Code: 44444
Company: Wheeler Bicycle Company
Position: Chairman
Birthday: January 3,1938
Work Phone: (614) 555-1235
Home Phone: (614) 555-1234

With a form like this, you can find and display the records for everyone who lives in Ohio and works for the Department of the Interior. Or anyone whose first name is John and whose postal code is 44444. Or any combination you can think of.

You can change it later
Even if you don't set up fields in the most useful way the first time, you can go back and add new fields, delete fields, or rearrange the ones you already have, even if you already have entered information in the field.

Creating a field

You can create a field name anywhere in form view by typing a name for the field followed by a colon . Each field in a database must have a unique name in order to distinguish one field from another in a database.



Last Name: Appleton
First Name: Edith
Business Name: Appleton and Associates
Street Address: 22381 42 Ave NE
City: Kirkland State: WA
Postal Code: 98034 Country: USA
Notes: Certified diving instructor

You can make room for notes, comments, or long entries by having a multiple-line field.

For more information on adding and rearranging fields, see "Positioning and moving fields" on page 262 and "Moving a field in list view" on page 263.

Once a field is created, you can enter information into it. However, you might want to create all your fields before you begin entering information into them.

To create a field

Need room to make comments or notations?
If you need room to make comments or notations on a form, create a multiple-line field.

1. Move the insertion point to where you want a field.
2. Type a field name, up to 15 characters, followed by a : (colon).

   Example: Type **Last Name:**

   You cannot have a single quotation mark (') in a field name.
3. Press ENTER.

   A dialog box is displayed in which you can specify the field size you want.
4. Accept the proposed field size of 20 characters wide and 1 line high.
   –or–
   Type a new width and height for the field.

   Example: To create a multiple-line field, in the Height box, type **3** to get a 3-line box.
5. Choose the OK button.

To enter information into a field

What if the field doesn't display the entire entry?
A field can hold more information than it displays. You can change the width or height of a field to show more or less of its entry. For more information see the topic "Changing the size of a field" on page 243.

1 Highlight the field in which you want to enter the information.

The field is immediately to the right of the field name.

2 Type the field entry.

3 Press TAB to move to the next field or SHIFT+TAB to move to the previous field.
–or–
Press ENTER.

Naming and saving a database for the first time

For information about closing a database or quitting Works, see "Closing a database or quitting Works" on page 311.

Until you save a database, all your work is held in the computer's memory. This is temporary; a power interruption or turning off your computer clears the computer's memory, and any work you haven't saved is lost. Saving a database moves it from the computer's memory to a floppy disk or a hard disk, where it won't be affected by power interruptions or turning off your computer.

When you create a new database, Works gives it a name, such as Data1. You can change this to a name that better describes the contents of your database.

To name and save a database for the first time

Save often
After saving your database for the first time, continue to save often so you don't lose your work due to equipment or power failure.

1 From the File menu, choose Save.

2 Type a name for the database.

The name can contain up to eight characters.

You cannot use a single quotation mark (') in a filename.

Example: Type **catalog**

3 Choose the OK button.

Works adds the filename extension to your filename, .WDB, which indicates the document is a database.

To save a database while you work

▶ From the File menu, choose Save.

Entering information

For a tutorial, press SHIFT + F1 and go to the "Creating a database" lesson in the Database section of the tutorial.

The information you store in each field—"90266" in a U.S. postal code field, "hammer" in a product field in an inventory database, "89" in a test score field in a student record database—is the field entry.

You can enter text, numbers, or a formula in a field. You can enter information in either list or form view.

To enter text or numbers

Entering numbers that begin with 0 (zero)

If you enter a U.S. ZIP code or other number that begins with zero, make sure you format the number with leading zeros format. Otherwise, Works will delete any leading zeros from the number. For more information on the leading zeros format, see "Changing number formats" on page 117.

1. Highlight the field in which you want to enter the information.

   The field is immediately to the right of the field name.

2. Type the entry.
3. Press TAB to move to the next field or SHIFT+TAB to move to the previous field.
   –or–
   Press ENTER.

To enter a formula into a field

For more information on using formulas in a database, see "Using mathematical formulas and functions to create calculating fields" on page 264.

1. Highlight the field in which you want to type the formula.
2. Type = (equal sign), followed by the formula.

   Example: Type **=balance+payment** to add the value in the Balance field to the value in the Payment field within an individual record.

3. Press ENTER.

   The result of the formula is displayed in the field, while the formula is displayed in the formula bar, and the same formula is entered in every record.

4. Press TAB to move to the next field or SHIFT + TAB to move to the previous field.
   –or–
   Press ENTER.

Highlighting to make changes

What is list view?
List view lets you look at several records at a time. For more information about list view, see "Working with multiple records" on page 231.

Any time you want to edit, copy, or move information in a Works database, you must first highlight it. What you can highlight and how you highlight it may change, depending on which database view you are using—form view or list view.

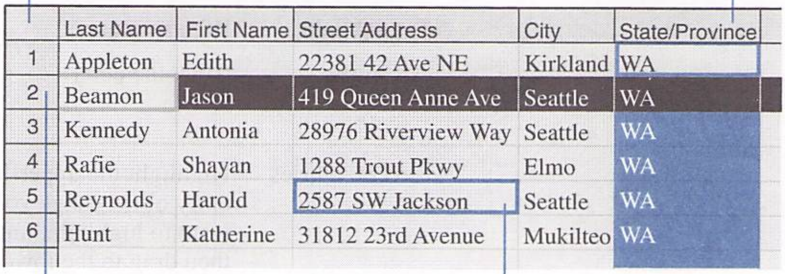
In form view, a record displayed in the document window is highlighted, and you can cut, copy, or paste it in its entirety. To highlight a new record, scroll to that record. To edit an entry, field name, or label, however, you must first highlight it.

In list view, you can highlight several records or fields at a time. You can also use a field name to highlight an entire field. It is easiest to see the results of a search or sort in list view, where several records are displayed in the document window.

In list view, you can highlight...

...the entire document by clicking here...

...an entire field by clicking the field name...

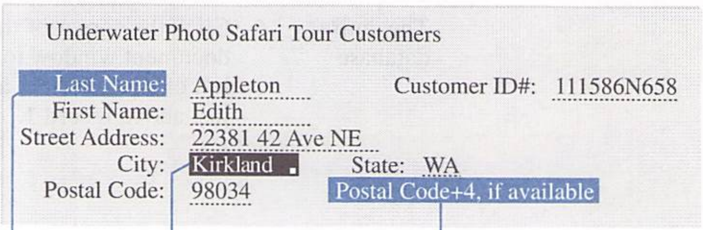


	Last Name	First Name	Street Address	City	State/Province
1	Appleton	Edith	22381 42 Ave NE	Kirkland	WA
2	Beamon	Jason	419 Queen Anne Ave	Seattle	WA
3	Kennedy	Antonia	28976 Riverview Way	Seattle	WA
4	Rafie	Shayan	1288 Trout Pkwy	Elmo	WA
5	Reynolds	Harold	2587 SW Jackson	Seattle	WA
6	Hunt	Katherine	31812 23rd Avenue	Mukilteo	WA

...a record by clicking the record number...

...and an entry.

In form view, you can highlight...



Underwater Photo Safari Tour Customers

Last Name: Appleton
Customer ID#: 111586N658
First Name: Edith
Street Address: 22381 42 Ave NE
City: Kirkland
State: WA
Postal Code: 98034
Postal Code+4, if available

...a field entry...

...a label.

...a field name...

Highlighting in form view

The table below lists mouse and keyboard methods for highlighting in form view.

To highlight	With a mouse	With the keyboard
A field name, field entry, or label	Click the field name, field entry, or label.	Press an arrow key until the item you want is highlighted.
A record	Click the arrow buttons on the status bar until the record you want is displayed.	Press CTRL+PAGE UP or CTRL+PAGE DOWN until the record you want is displayed.
A field	Click the field.	Press TAB until the field is highlighted.

Highlighting in list view

The table below lists mouse and keyboard methods for highlighting in list view.

To highlight	With a mouse	With the keyboard
An entry	Click the entry.	Press an arrow key to move the highlight to the entry.
Several entries	Highlight the upper-left entry of the range you want to highlight, and then drag to the lower-right entry.	Hold down the SHIFT key, and then press an arrow key to extend the highlight.
A record	Click the record number	Press CTRL+F8.
An entire field	Click the field name.	Press SHIFT+F8.
The entire database	Click the corner of the document window to the left of the first field and just above record 1.	Press CTRL+SHIFT+F8.

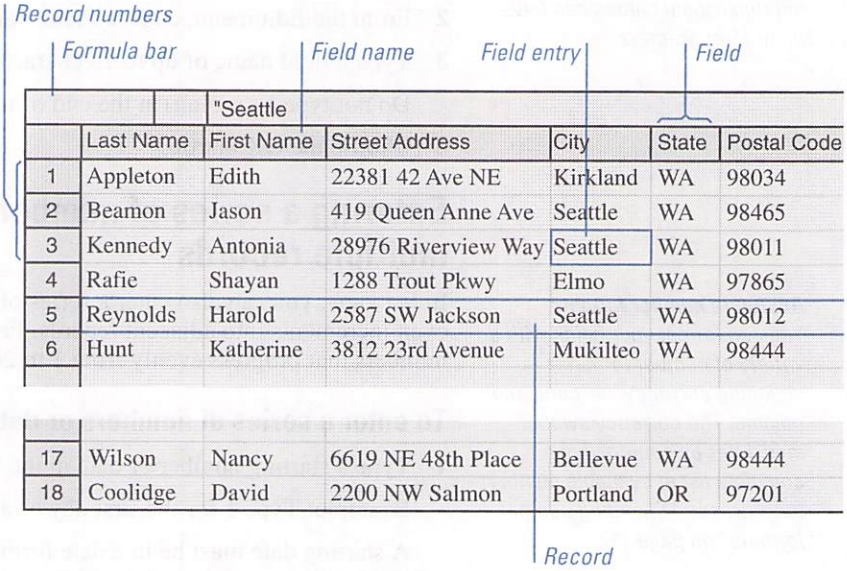
Working with multiple records

For a tutorial, press SHIFT + F1, and go to the "Working with lists" lessons in the Database section of the tutorial.

Once you have created your form and entered some information, you may want to look at all the records in your database. List view displays your records in a grid of rows and columns similar to a spreadsheet. This view is convenient for:

- Working with several records at the same time.
- Seeing the results of a search or query.
- Copying field entries into several adjacent records at once.
- Deleting and clearing groups of fields and records.

In list view, each row is a record and each column is a field. The fields you create in form view are automatically created in list view, and vice versa. You can also enter and edit field names and field entries in list view.



"Seattle

	Last Name	First Name	Street Address	City	State	Postal Code
1	Appleton	Edith	22381 42 Ave NE	Kirkland	WA	98034
2	Beamon	Jason	419 Queen Anne Ave	Seattle	WA	98465
3	Kennedy	Antonia	28976 Riverview Way	Seattle	WA	98011
4	Rafie	Shayan	1288 Trout Pkwy	Elmo	WA	97865
5	Reynolds	Harold	2587 SW Jackson	Seattle	WA	98012
6	Hunt	Katherine	3812 23rd Avenue	Mukilteo	WA	98444
17	Wilson	Nancy	6619 NE 48th Place	Bellevue	WA	98444
18	Coolidge	David	2200 NW Salmon	Portland	OR	97201

To display list view

- On the Toolbar, click the List View button.
  –or–
  From the View menu, choose List.

Creating a field in list view

Get more details
You can learn more about entering information in the topic, "Entering information" on page 228.

Although you will probably find it easier to create fields in form view, you can also create fields in list view.

You create a field in list view by naming an empty column. Each field in a database must have a unique name in order to distinguish the information in that field from information in other fields.

To create a field in list view

Field and field name size limits
You can have up to 256 fields in a database; field names can have up to 15 characters.

1. Move the highlight to a field in an empty column where you want a new field.
2. From the Edit menu, choose Field Name.
3. Type a field name of up to 15 characters.

   Do not type a : (colon) at the end of the name.
4. Choose the OK button.

Entering a series of numbers or dates in multiple records

Available number formats
You can format your fields with a variety of number formats, including currency, percent, and comma. The currency symbol may differ by country. For a complete list of available number formats, see "Changing number formats" on page 117.

In list view, you can also enter a series of numbers or dates that progress in even increments into adjacent records. For example, you can insert invoice numbers that progress evenly from 1 to 200 into a group of records.

To enter a series of numbers or dates in list view

1. Type a starting number or date in the first field of the series.

   Example: Type **1** for the first day of a month.

   A starting date must be in a date format. For more information, see "Using dates and times in a database" on page 268.
2. Click the Enter box in the formula bar.
   –or–
   Press ENTER.
3. Highlight the first field and the fields below in which you want to enter the series.

   Example: If you type 1 in a field in record 100 and you want the series to run through record 110, highlight the field containing the 1 and the nine fields below through record 110.

4 From the Edit menu, choose Fill Series.

5 Choose the unit of measurement you want—Number, Day, Weekday, Month, or Year.

Example: to increment the days of a month without including Saturday and Sunday, choose the Weekday option button.

What if you want a decreasing series?
In the Step By box, type a negative value.

6 If you want Works to increase the series by an increment other than 1, type the increment in the Step By box.

Example: if you want only every fifth day, type **5** in the Step By box.

7 Choose the OK button.

Works fills the highlighted fields with values in the increment you specified.

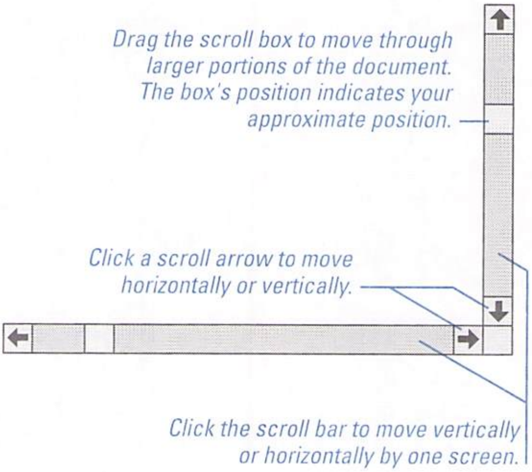
Moving through a database

Using the scroll bars and navigation buttons make it easy for you to view different parts of your database.

In form view, you can see one record in the document window at a time; if your form is bigger than the document window, use the scroll bars to move through the form. To move quickly from one record to the next, or to any record within your database, use the navigation buttons on the left end of the status bar.

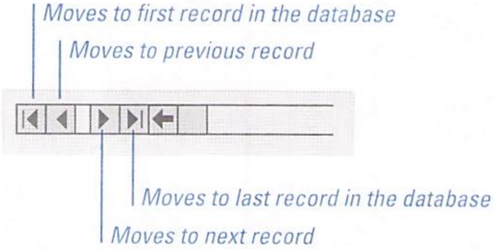
In list view, since your database probably contains more records than Works can display in one window, you may need to scroll through the database to see all your records.

To quickly scroll through a large list or a within a large form


Drag the scroll box to move through larger portions of the document. The box's position indicates your approximate position.
Click a scroll arrow to move horizontally or vertically.
Click the scroll bar to move vertically or horizontally by one screen.

To quickly scroll from form to form

The last record is blank
When you click the right-most button, the last record in the database will be a blank record.


Moves to first record in the database
Moves to previous record
Moves to last record in the database
Moves to next record

To scroll through a database

Want to type in the next line in a multiple-line field?
To begin typing on the next line in a multiple-line field, press SHIFT+ENTER.

In form view, press	To move to the	In list view, press
	Field that is one to the left or right	← or →
↓ or ↑	Next line or field, up or down	↓ or ↑
Tab	Next unlocked field	Tab
Shift + Tab	Previous unlocked field	Shift + Tab
	Leftmost field	Home
	Rightmost field	End
Home	Left edge of form	
End	Right edge of form	
Page Down	Down one window	Page Down
Page Up	Up one window	Page Up
Ctrl + Home	First record	Ctrl + Home
Ctrl + End	Last record	Ctrl + End
Ctrl + Page Down	Next record	
Ctrl + Page Up	Previous record	
Ctrl + ←	Left one window	Ctrl + Page Up
Ctrl + →	Right one window	Ctrl + Page Down

Viewing a database on the screen

You can make it easier to work with your database by controlling what you display on the screen, including the perimeters of a field or different sections of your database at one time.

Showing field perimeters

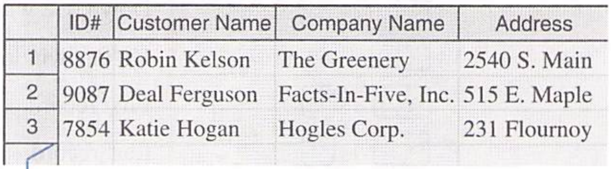
In form view, you can:

- Show or hide field lines that indicate where the field is.

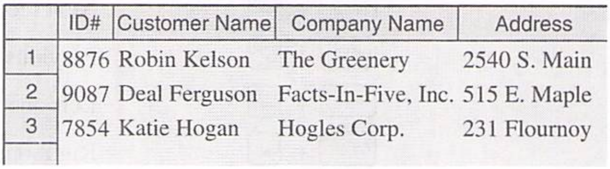
In list view, you can:

- Show or hide the gridlines that show you where field borders are.
- Divide the database window into separate sections so you can view different parts of a database simultaneously.

A database in List view with gridlines showing…



	ID#	Customer Name	Company Name	Address
1	8876	Robin Kelson	The Greenery	2540 S. Main
2	9087	Deal Ferguson	Facts-In-Five, Inc.	515 E. Maple
3	7854	Katie Hogan	Hogles Corp.	231 Flournoy



	ID#	Customer Name	Company Name	Address
1	8876	Robin Kelson	The Greenery	2540 S. Main
2	9087	Deal Ferguson	Facts-In-Five, Inc.	515 E. Maple
3	7854	Katie Hogan	Hogles Corp.	231 Flournoy

…and with gridlines turned off.

Showing gridlines can make it easier to read a database in List view.

To show or hide field lines in form view

Printing field lines
You can print field lines by choosing the Print Field Lines check box in the Page Setup & Margins dialog box.

▶ From the Options menu, choose Show Field Lines.

When Show Field Lines is chosen, a mark is displayed beside the command name on the Options menu. To hide field lines, choose the command again.

To show or hide gridlines in list view

Printing gridlines
You can print gridlines by choosing the Print Gridlines check box in the Page Setup & Margins dialog box.

▶ From the Options menu, choose Show Gridlines.

When Show Gridlines is chosen, a mark appears beside the command name on the Options menu. To hide gridlines, choose the command again.

Viewing separate parts of the database on the screen

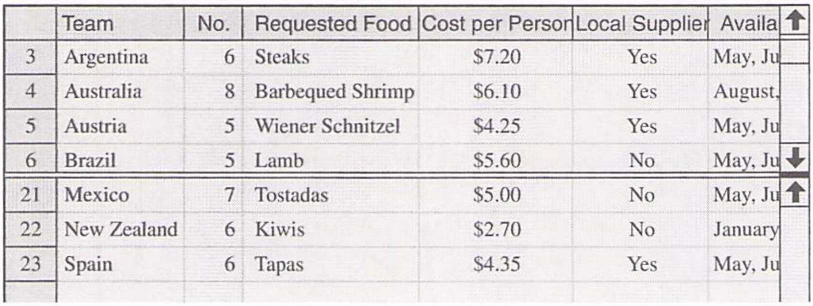
When you're working in list view on a large database, you may find it helpful to view several parts of it at one time.

You can divide the database work area in a number of ways. You can divide it into:

- Two side-by-side panes.
- One upper and one lower pane.
- Four panes.

Each pane can show a different part of the database and has its own scroll bars.

In list view, you can make working with a large database easier by dividing the document window into panes, which allows you to see several parts of the database at once.



	Team	No.	Requested Food	Cost per Perso	Local Supplie	Availa
3	Argentina	6	Steaks	$7.20	Yes	May, Ju
4	Australia	8	Barbequed Shrimp	$6.10	Yes	August,
5	Austria	5	Wiener Schnitzel	$4.25	Yes	May, Ju
6	Brazil	5	Lamb	$5.60	No	May, Ju
21	Mexico	7	Tostadas	$5.00	No	May, Ju
22	New Zealand	6	Kiwis	$2.70	No	January
23	Spain	6	Tapas	$4.35	Yes	May, Ju

To quickly insert or move a split

Pane sizes and scrolling
When you split a window, each pane must have at least two lines displayed. Otherwise, the panes disappear. Adjust the size of the pane to show at least two lines of text.

▶ Drag the split box to where you want the split.

The split box is a thin bar at the top of the vertical scroll bar and on the left-side of the horizontal scroll bar.

To quickly remove a split

▶ Double-click the split bar.

To quickly move between panes

- Click in the pane you want.

  –or–

  Press F6 to move the insertion point to the next pane, or press SHIFT+F6 to move the insertion point to the previous pane.

To insert, move, or remove a split

1. From the Window menu, choose Split.

   If you do not have separate panes, Works displays the horizontal and vertical split bars in the document window.

   If you already have separate panes, Works positions the split pointer at the intersection of the split bars.

2. Press the UP ARROW or DOWN ARROW and LEFT ARROW or RIGHT ARROW keys to move the split bars to where you want them.

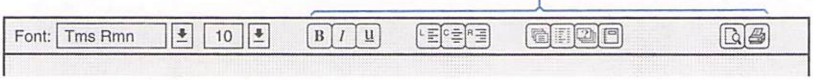
   If you want to remove the horizontal split pane, move the bar to the very top or bottom of the document window.

   If you want to remove the vertical split pane, move the bar to the far left or right of the document window.

3. Press ENTER.

Speeding up your work with the Toolbar

The Toolbar provides shortcuts for mouse users when performing many Database commands. Initially, Works displays the Toolbar when you create a new database, but you can turn off the Toolbar if you would like more room in your window.

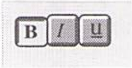


Toolbar buttons

On the Toolbar, with one click, you can change the appearance of highlighted entires, or you can switch to another database view or print your database.

Before you can use the font styles or alignment Toolbar buttons, you must first highlight the information you want to format.

Anytime you move the highlight to an entry you have formatted, the Toolbar button changes to show the font style or format of that entry.



The button appears pressed down, to indicate that the highlighted entry is bold.

Using the Toolbar

Choose	To	Choose	To
B	Make all entries in the highlighted field bold	▭	Switch to form view
I	Make all entries in the highlighted field italic	▤	Switch to list view
U	Underline all entries in the highlighted field	?	Switch to query view
L ≡	Left align a field	▭	Switch to report view
C ≡	Center a field	🔍	Display print preview
R ≡	Right align a field	🖨	Start printing
Tms Rmn ⏷	Choose font		
10 ⏷	Choose character size		

To hide or show the Toolbar.

▶ From the Options menu, choose Show Toolbar.

When Show Toolbar is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Toolbar, choose the command again.

Adding a field

As you work with your database and use it for various purposes, you may find that you want to include additional information that will help you to sort, search, or organize your database more accurately. Works allows you to add fields at any time.

Usually you will want to add fields in form view because you then have complete control over where they are placed in the window, but you can also add fields in list view.

To add a field in form view

1. Move the highlight to where you want a field.
2. Type a field name, followed by a : (colon).

   Example: Type **Last Name:**

   You cannot have a single quotation mark (') in a field name.
3. Press ENTER.
4. Accept the proposed field size of 20 characters wide and 1 line high.
   –or–
   Type a new width and height for the field.

   Example: To create a multiple-line field, type **3** in the Height box.
5. Choose the OK button.

To add and name a field at the same time in list view

Adding a field on the end
You can add a field to the right of your last field by typing an entry, and then renaming the field, as in steps 3 through 5.

1. Highlight the entire field directly to the right of where you want to add the new field.
2. From the Edit menu, choose Insert Record/Field.

   Works inserts a column directly to the left of the field you highlighted.
3. From the Edit menu, choose Field Name.
4. Type a field name of up to 15 characters.

   You cannot have a single quotation mark (') in a field name.
5. Choose the OK button.

   Works names the new field.

Deleting a field

Deleting removes an entire field from a database, including its field entries, and its formatting. Clearing removes one or more entries, but leaves intact any formatting you've done—bold, center alignment, and so on.

Important If you delete a field, you will lose all the entries in every record in that field.

To delete a field in form view

1. Highlight the field you want to delete.
2. From the Edit menu, choose Delete Field.

   Works displays a message asking you to confirm deletion of the field and all its entries.
3. Choose the OK button to delete both the field name and the field entries in all records.

To delete a field in list view

1. Highlight the entire field you want to delete.

   If you want to delete more than one field, highlight them.
2. From the Edit menu, choose Delete Record/Field.

   Works deletes the field and all its entries.

To clear a field entry

1. Highlight the field entry you want to clear.

   In list view, to clear more than one field entry, highlight more than one field entry.
2. From the Edit menu, choose Clear Field Entry.

   The field entry is cleared, but any formatting in the field remains.

To clear a formula

1. Highlight the field that contains the formula you want to clear.

   In list view, you must highlight the entire field.
2. From the Edit menu, choose Clear Formula.

Changing the size of a field

As you enter information in your database, you may find that you want to change the size of a field to better match the length of its entries.

Changing field size in form view

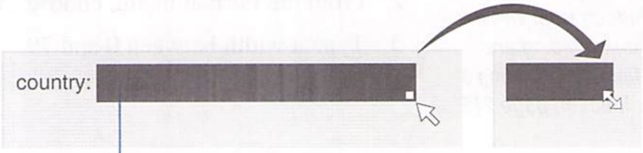
When you create a new field in form view, Works proposes to make it 20 characters wide and 1 line high, but you can change the field's dimensions to match the information you enter. For example, a Last Name field might be 1 line by 15 characters wide, but a Note field might be 4 lines by 50 characters wide.

Field sizes in each view are set separately
You set field size in one view separately from every other view. For example, a field can be 25 characters wide and 2 lines high in form view and 50 characters wide in list view.

To quickly change field size in form view

▶ Drag the field size box until it is the size you want.

When Works displays #####
Works displays ##### if a number or date exceeds its field width. You can widen the field or change the number format to display the complete date or number.



You can change the size of a field by first highlighting the field, and then clicking the small white box in the lower-right corner of the field. When you click the box, the pointer changes shape to indicate you can now change the field size. While holding down the mouse button, you can drag the field until it is the size you want.

To change field size in form view using exact measurements

Field size and contents
Regardless of the size you make a field, it can only contain up to 256 characters.

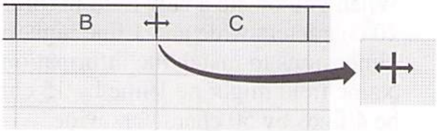
1. Highlight the field you want to change.
2. From the Format menu, choose Field Size.
3. Type a width between 1 and 325 characters.
4. Type a height between 1 and 325 lines.
5. Choose the OK button.

Changing field size in list view

In list view, Works presets each field to be 10 characters wide. Fields are always 1 line high. When you change the width of any entry in a field, the new width applies to the entire field.

To quickly change field size in list view

▶ Drag the field's right border.



When you position the mouse pointer over a border, it changes shape to indicate that you can now drag the border and change the width.

To change field size in list view using exact measurements

Setting 0 (zero) as a field width
If you set 0 as a field width, the field will be hidden from view. For information on hiding and displaying a field, see "Hiding a field name or field" on page 245.

1. Highlight the field you want to change.
2. From the Format menu, choose Field Width.
3. Type a width between 0 and 79.
4. Choose the OK button.

Hiding a field name or field

Hiding records when you group records

If you search your database for records containing certain entries, or query your database for records that meet certain criteria, Works will hide all the records that do not match your search or query instructions. For more information on searching, see the topic "Searching a database to find a group of records" on page 272 or "Querying a database for related records" on page 274.

In list view, you can hide entire fields in order to hide sensitive information or to view two nonadjacent fields side-by-side by hiding the fields between the two that you want to view together.

In form view, you can hide field names in order to better organize your form and make it easier to read. For example, you might want to display city and state entries on one line, without field names, like this:

Example: Kirkland WA.

You could do so by first hiding the field name and then moving the fields side-by-side. You can also hide a field name in form view in order to enter more descriptive text or line a series of fields beside each other.

To quickly hide a field in list view

▶ Drag the field's right border to the left until the field is hidden.

To hide a field using measurements

1. Highlight an entry in the field you want to hide.
2. From the Format menu, choose Field Width.
3. Type **0** (zero).
4. Choose the OK button.

   The field is hidden only in list view. It continues to be displayed in form view.

To display a hidden field in list view

1. Press F5.
2. In the Go To box, type the name of the field you want to display, or choose the field name from the Names box.
3. Choose the OK button.

   The field is highlighted, but not displayed.
4. From the Format menu, choose Field Width.
5. Type a value greater than 0 (zero).
6. Choose the OK button.

   The field is now displayed.

Hiding a field name in form view

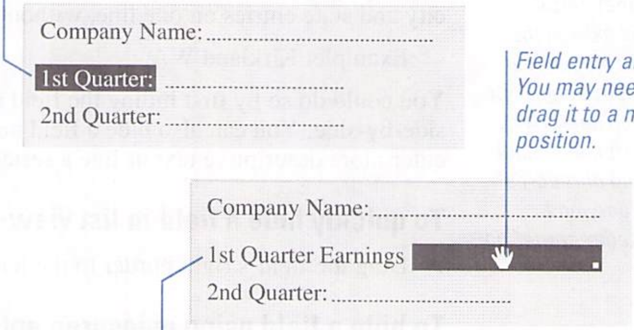
Sometimes you may want the field names in your database to be more descriptive of the field than you can get with the 15 characters Works

For more information on entering labels, see "Entering labels or descriptive text in a form" on page 260.

If you want a colon at the end of a label
*If you want a descriptive label to appear the same as a field name (that is, followed by a colon), type double quotation marks (") before the label. For example, type: "***1st Quarter Earnings:*** *Otherwise, Works assumes you are typing a new field name.*

allows for field names. You can use a more descriptive label for a field named 1st Quarter, for example, by hiding the field name, and then typing the more descriptive label, First Quarter Earnings, to identify the field.

To hide a field name in form view, you must first highlight it, and then choose Show Field Name from the Format menu.



Field entry area: You may need to drag it to a new position.

After you hide the field name, you can type a label that better describes the field's contents. You may also need to drag the field entry area so that it is directly to the right of the new label you typed.

You may also want to hide a field name because it is repetitive, such as fields named Item1, Item2, Item3 on each line of an invoice. In a customer form, you can hide the names of the City and State fields, and then type the more inclusive label **City, State** to the left of the City field.

To hide or display a field name in form view

1. Highlight the field name you want to hide or display.
2. From the Format menu, choose Show Field Name.

   When Show Field Name is chosen, a mark is displayed beside the command on the Format menu. To turn off Show Field Name, choose the command again.

Hiding a record

For more information on how to control which database records you want displayed, printed or included in a report, see "Searching a database to find a group of records" on page 272 or "Querying a database for related records"on page 274.

You can hide individual records in order to exclude them from printing or from being included in a report, form letter, or on mailing labels. This method works well for records that are not related and so would not be hidden as a result of a search or query.

Hidden records are not displayed in list view, you cannot scroll to them in form view, and you cannot delete them accidently. You can see the records you hid by switching the hidden and the displayed records. You can also unhide all hidden records.

To hide a record in form view

Hiding multiple records

You can hide more than one record at a time if you are in list view. In form view, you can only hide one record at a time.

1. Scroll to the record you want to hide.
2. From the Select menu, choose Hide Record.

To hide a record in list view

1. Highlight each record you want to hide.
2. From the Select menu, choose Hide Record.

To switch hidden and displayed records

- From the Select menu, choose Switch Hidden Records.

To display all records

- From the Select menu, choose Show All Records.

  Words displays all the records in the database, and hidden records become unhidden.

Changing a field name

For information on duplicating a database, see "Naming, saving, duplicating, and reopening a database"on page 308.

As you work with your database, you may find that the field names you assigned when you created the database aren't as useful as you had anticipated. Or you might want to duplicate a database and use it to organize different information. With Works, you can change field names at any time so they accurately reflect the entries that make up the field.

To change a field name in list view

1. Move the highlight to any entry in the field whose name you want to change.
2. From the Edit menu, choose Field Name.
3. Type a field name of up to 15 characters.

   You cannot use a single quotation mark (') in any field name.
4. Choose the OK button.

To change a field name in form view

1. Move the highlight to the field name you want to change.
2. Type a new field name of up to 15 characters, followed by a : (colon).
3. Press ENTER.

Making changes to a field entry

You can edit in either view
Since both list and form view display the same information, you only need to edit the information once.

You have two options when you need to correct a misspelled word, change a field's formula, or replace an existing field entry. You can either replace the field entry completely, or you can edit your field entries and avoid retyping the entire entry.

To replace a field entry

If you change your mind
To cancel changes, press ESC or click the Cancel box in the formula bar.

1. Highlight the field entry you want to change.
2. Type a new entry.

   As you type, the new typing replaces the old entry.
3. Click the Enter box to add the new entry to the field.
   –or–
   Press ENTER.

To edit a field entry

1. Highlight the field entry you want to edit.
2. Click the formula bar.
   –or–
   Press the F2 key.
3. Use any of the methods listed in the table on the following page to move, highlight, or delete in the formula bar.
4. Click the Enter box to confirm your changes.
   –or–
   Press ENTER.

To	Do this	Or press
Move the insertion point to the beginning of the text	Click to the left of the first character in a line	Home
Move the insertion point to the end of the text	Click to the right of the last character in a line	End
Move the insertion point left one character	Click one character to the left	←
Move the insertion point right one character	Click one character to the right	→
Move the insertion point anywhere in the formula bar	Click the formula bar where you want the insertion point	← or →
Highlight one or more characters	Drag the mouse pointer over the characters	⇧Shift + ← ⇧Shift + →
Delete highlighted characters		Del

To clear a field entry

1 Highlight the field entry you want to clear.

In list view, to clear more than one field entry, highlight all the field entries you want to clear.

2 From the Edit menu, choose Clear Field Entry.

The field entry is cleared, but any formatting you assigned to the field remains.

To remove a formula

1 Highlight the field that contains the formula you want to clear.

In list view, be sure to highlight the entire field.

2 From the Edit menu, choose Clear Formula.

The formula is gone, but any formatting you assigned to the field remains.

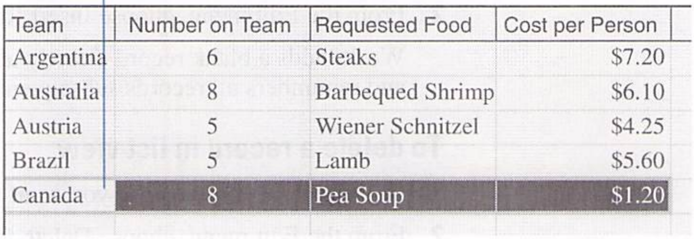
Adding and deleting records in a database

How many records do you have?
You can tell which record you are working with and how many records you have in your database by looking in the last two sections on the right side of the status bar. The next to last section tells you the number of the current record. The next section, 40/66, for example, indicates the number of displayed records—(40) versus the total number of records (66).

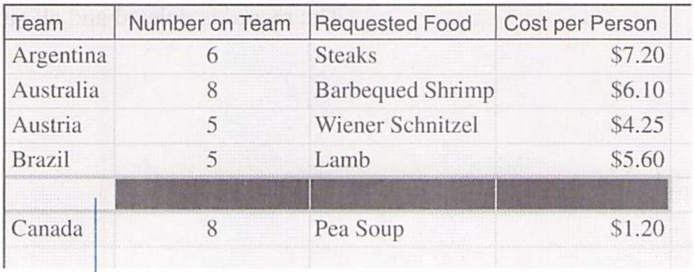
You can add new records to a database by inserting them after existing records or by inserting them between existing records.

You can also delete records you no longer need. Again, deleting several records at a time is easiest in list view.

To insert a blank record in list view, highlight the record directly below where you want to insert the blank record and choose Insert Record/Field from the Edit menu.



Team	Number on Team	Requested Food	Cost per Person
Argentina	6	Steaks	$7.20
Australia	8	Barbequed Shrimp	$6.10
Austria	5	Wiener Schnitzel	$4.25
Brazil	5	Lamb	$5.60
Canada	8	Pea Soup	$1.20



Team	Number on Team	Requested Food	Cost per Person
Argentina	6	Steaks	$7.20
Australia	8	Barbequed Shrimp	$6.10
Austria	5	Wiener Schnitzel	$4.25
Brazil	5	Lamb	$5.60
Canada	8	Pea Soup	$1.20

Works inserts a blank record above the highlighted record.

To add a record in form view

Adding a record to the end of the database
In form view, you can always add a record after the last record in your database by simply pressing TAB while you are in the last field of the last record.

1 Scroll to the record before which you want to add the blank record.

Example: Scroll to record number 3.

2 From the Edit menu, choose Insert Record.

Works adds a blank record and renumbers all records following the new record.

Example: The new, blank record becomes record number 3, and the existing record becomes record number 4.

To delete a record in form view

1. Scroll to the record you want to delete.
2. From the Edit menu, choose Delete Record.

   The record is deleted and all subsequent records are renumbered.

To add a record in list view

1. Highlight the entire record directly below where you want to add the blank record.

   If you want to add more than one record, highlight one record for each blank record you want to insert.
2. From the Edit menu, choose Insert Record/Field.

   Works adds a blank record directly above the record you highlighted and renumbers all records subsequent to the new record.

To delete a record in list view

1. Highlight the entire record you want to delete.
2. From the Edit menu, choose Delete Record/Field.

   The record is deleted and all subsequent records are renumbered.

Changing fonts, font sizes, and font styles

Fitting more on a printed page
You can fit more on a printed page when you print in list view, for example, by choosing a smaller font size and then adjusting field widths to match the smaller entries.

Changing fonts, font styles, and font sizes can help you showcase important text or figures in your database. It can also help you fit more on a printed page.

Character fonts are sets of characters with specific designs. For example:

> This text is Helv font.
>
> `This text is Courier font.`

You can use two fonts in a database
When you change fonts and font sizes , your change affects all records and entries in that view. However, you can use up to two different fonts in your database —one in form view and another in list view.

Font styles such as bold, italic, and underline determine the appearance of text and numbers. You can apply font styles to fields before or after you enter information.

To quickly change a font

- ▶ On the Toolbar, click the Font box arrow to display the list of fonts, and then click the font you want.
  –or–
  Press CTRL+F to display the list of fonts, and choose the font you want.

To quickly change a font size

- ▶ On the Toolbar, click the Font Size box arrow to display the list of font sizes, and then click the size you want.
  –or–
  Press CTRL+Z to display the list of font sizes, and then choose the size you want.

To quickly change font styles

Underlining limitations
You can only underline fields that contain text or values. You cannot underline blank fields.

1. Highlight the field entry or field that you want to change.
2. On the Toolbar, click the appropriate button; or press the appropriate shortcut key.

To	Click, or	Press these keys
Make all entries in the highlighted field bold	**B**	CTRL+B
Make all entries in the highlighted field italic	*I*	CTRL+I
Underline all the entries in the highlighted field	u	CTRL+U
Return to plain text		CTRL+SPACEBAR

To change the font and font size at the same time

1. From the Format menu, choose Font.
2. Under Font, choose the font you want or type a font name in the font box.
3. Under Size, choose the font size you want or type a new size.
4. Choose the OK button.

Changing alignment of a field

You start with general alignment
When you create a database, all fields are formatted with the general alignment: text is aligned to the left of a field and numbers to the right .

Field alignment positions text and values horizontally within a field. You can choose from General, Left, Right, and Center alignment options.

You change the alignment of all entries in a field to align to the left or right in the field or to be centered in the field.

To quickly change alignment

1. Highlight the field entry or field you want to align.
2. On the Toolbar, click the appropriate button; or press the appropriate shortcut key.

To	Click	Press these keys
Left align a cell	L	CTRL+L
Right align a cell	R	CTRL+R
Center a cell	C	CTRL+E

Copying and moving information within a database

For more information on copying to other tools or applications see "Copying or moving entries to another Works tool" on page 285 or "Sharing database information with other applications" on page 305.

You can copy or move field entries or entire records to another location in your database, to another database, or to another Works document or Windows version 3.0 or later application. Use copying to:

- Avoid repetitive typing.
- Consolidate information from more than one database.

When you copy a field to another Works database, font styles and alignments are also copied to the new field.

To copy a field

Always use list view to copy a single field
To copy a single database field to another Works tool, you must be in list view. When you copy in form view, you can only copy an entire record.

1. Highlight each field you want to copy.
2. Press CTRL+INS.
   –or–
   From the Edit menu, choose Copy.

   If you want to copy to another database, document, or Windows version 3.0 or later application, open or switch to that document or application.
3. Highlight the field in which you want to place the copy.
4. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

   Works inserts the copy in its new location.

To immediately repeat a copy command

Why finish copying immediately?
When you copy information to be pasted in a new location, Works places that copy on the clipboard, where it remains only until you choose the Cut or Copy command again.

1. Move the insertion point or highlight to where you want to insert the copied information.
2. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

   Works inserts another copy in its new location.

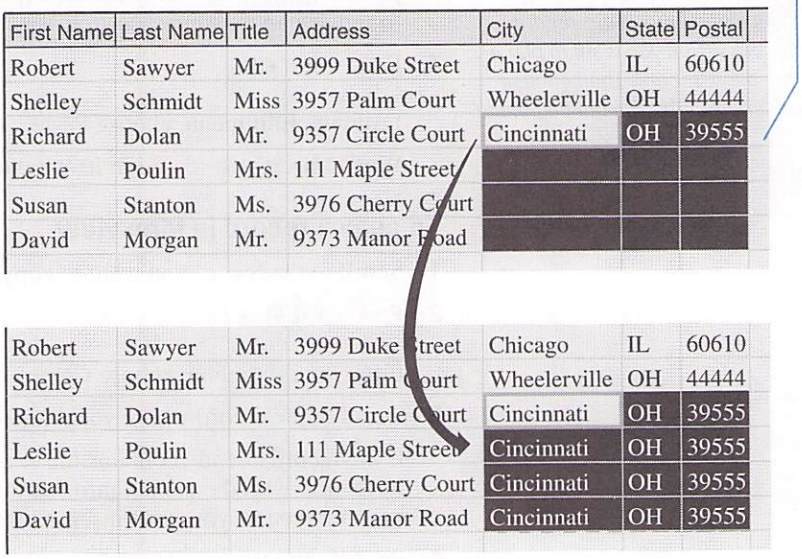
To move a field entry

1. Highlight the entry you want to move.
2. Press SHIFT+DEL.
   –or–
   From the Edit menu, choose Cut.
3. Highlight the field where you want to move the entry.

   If you want to move the entry to another document or Windows version 3.0 or later application, open or switch to that document or application.
4. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

Copying to adjacent fields

In list view, you can copy one field's text or values into any number of fields below it using the Fill Down command from the Edit menu.



You can copy these field entries into the cells below by choosing Fill Down from the Edit menu. Changes you make in list view are also made in form view, and vice versa.

First Name	Last Name	Title	Address	City	State	Postal
Robert	Sawyer	Mr.	3999 Duke Street	Chicago	IL	60610
Shelley	Schmidt	Miss	3957 Palm Court	Wheelerville	OH	44444
Richard	Dolan	Mr.	9357 Circle Court	Cincinnati	OH	39555
Leslie	Poulin	Mrs.	111 Maple Street			
Susan	Stanton	Ms.	3976 Cherry Court			
David	Morgan	Mr.	9373 Manor Road			

Robert	Sawyer	Mr.	3999 Duke Street	Chicago	IL	60610
Shelley	Schmidt	Miss	3957 Palm Court	Wheelerville	OH	44444
Richard	Dolan	Mr.	9357 Circle Court	Cincinnati	OH	39555
Leslie	Poulin	Mrs.	111 Maple Street	Cincinnati	OH	39555
Susan	Stanton	Ms.	3976 Cherry Court	Cincinnati	OH	39555
David	Morgan	Mr.	9373 Manor Road	Cincinnati	OH	39555

To quickly copy field entries into the adjacent fields below

1. In list view, highlight each field entry you want to copy.
2. Extend the highlight down to include the field entries you want to fill with the copied information.

   If those fields already contain information, Works replaces that information with the copied entries.
3. From the Edit menu, choose Fill Down.

Copying and moving records

You can copy or move an entire record to a new location in either form or list view or to any other Works database's form or list view.

To copy a record in list view

1. Highlight the record you want to copy.
2. Press CTRL+INS.
   –or–
   From the Edit menu, choose Copy.
3. Highlight the record where you want to place the copy.

   If you highlight a record that already contains information, Works replaces that information with the copied information. If you don't want to replace an existing record, insert a blank record, and copy into it.
4. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

   Works inserts the record in its new location.

Inserting a blank record
You insert a blank record by highlighting the entire record before which you want to place the blank record. Then choose Insert Record from the Edit menu.

To copy a record in form view

1. Scroll to the record you want to copy.
2. Press CTRL+INS.
   –or–
   From the Edit menu, choose Copy.
3. Scroll to the record where you want to place the copy.

   If the record already contains information, Works will replace that information with the copied information. If you don't want to replace an existing record, you must insert a blank record, and then copy into it.
4. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

   Works inserts the record in its new location

To move a record in list view

1 Highlight the record you want to move.

2 Press SHIFT+DEL.
–or–
From the Edit menu, choose Cut.

3 Highlight the record where you want to place the copy.

If you highlight a record that already contains information, Works replaces that information with the copied information. If you don't want to replace an existing record, insert a blank record, and copy into it.

Inserting a blank record
You insert a blank record by highlighting the entire record before which you want to place the blank record. Then choose Insert Record from the Edit menu.

4 Press SHIFT+INS.
–or–
From the Edit menu, choose Paste.

Works inserts the record in its new location.

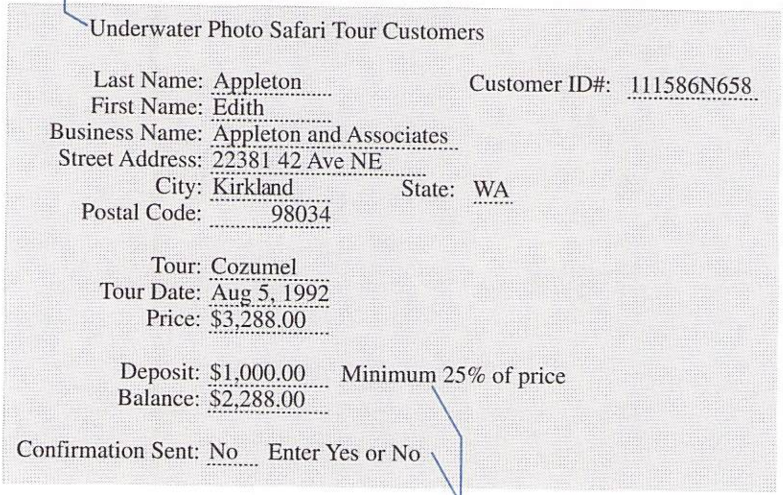
Entering labels or descriptive text in a form

In form view, you can include titles and other information so that your form presents the information you want as clearly and usefully as possible. If many people will be entering information into your database, you may find it helpful to include some instructions, descriptions, or examples for making correct field entries.

For example, you could include an example to illustrate an entry's format (such as for postal codes or telephone numbers), entry guidelines, and so on. This type of title or descriptive text, which appears in each record, is called a label. While you can't see labels in list view, they can be extremely helpful as you fill out a form in form view.

Don't use colons in labels
Because field names always end with a colon, do not use a colon to end a label. If you do, Works will create a new field instead.

This label identifies the database.



Underwater Photo Safari Tour Customers

Last Name: Appleton
First Name: Edith
Business Name: Appleton and Associates
Street Address: 22381 42 Ave NE
City: Kirkland
State: WA
Postal Code: 98034
Customer ID#: 111586N658

Tour: Cozumel
Tour Date: Aug 5, 1992
Price: $3,288.00

Deposit: $1,000.00 Minimum 25% of price
Balance: $2,288.00

Confirmation Sent: No Enter Yes or No

These labels provide guidelines for individuals who may work with this record.

Making labels stand out
You can format your labels to be bold, italic, or underlined so that they stand out and can be differentiated from field names. For more information, see "Changing fonts, font sizes, and font styles" on page 253.

Hiding fields names and putting in labels
You may want to replace a brief field name with a more descriptive label. Start by hiding the field name, and then typing the label. For more information on hiding a field name, see "Hiding a field name or field" on page 245.

To create a label

1. Move the insertion point to where you want the label.
2. Type the text for the label.

   Do not end a label with a colon.
3. Press ENTER.

   If you type over a field name, Works displays a message asking if you want to delete the field and its contents in all the records. Press ESC twice to avoid deleting the field, and then move the insertion point to a new location.

To quickly change the position of a label

▶ Drag the label to a new position.

To precisely change the position of a label

1. Highlight the label you want to move.
2. From the Edit menu, choose Position Label.
3. Use the arrow keys to move the label to its new position.
4. Press ENTER.

To duplicate a label

1. Highlight the label you want to duplicate.
2. From the Edit menu, choose Duplicate Label.
3. Move the highlight to where you want to place the duplicate label.
4. Press ENTER.

   Works places the duplicate label at the highlight.

To delete a label

1. Highlight the label you want to delete.
2. From the Edit menu, choose Delete Label.

   The label is deleted.

Positioning and moving fields

After creating a database, you may want to change the position or location of a field to make it easier to use and more attractive, or because you want it to match a preprinted form when you print in form view.

In list view, you may want to move fields so that fields that contain related information are closer to each other.

Filling in preprinted forms
If you position the fields so that the entries are aligned correctly, you can prepare the form for each individual record so that it fills in a preprinted form you load into your printer. If Snap To Grid is off in form view, you can position fields and labels anywhere on the screen in precise increments, which means that you can position them extremely accurately. When you print, tell Works not to print field names.

Positioning a field in form view

You can reposition a field in any location on a form. When you turn on the Snap To Grid command from the Options menu, you can move the insertion point in even increments around the form—when you move around the window, you move up and down one evenly-spaced line at a time. The Snap To Grid option is particularly useful if you're not concerned about matching your form to a preprinted form.

The Snap To Grid option is also useful when you want to use another Works feature, the Slide To Left option. The Slide To Left option lets you eliminate excess space between fields when you print a database in form view. You can eliminate the excess space between the City and Country fields in an address database, for example. If you position the fields that you want to slide together on the same line while the Snap To Grid option is turned on, you can be certain that they are lined up precisely vertically.

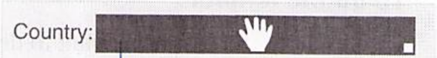
For more information on using the Slide To Left option, see "Removing spaces when printing forms" on page 301.

You can also be certain that two fields are lined up precisely vertically by comparing each field's y-coordinates. Works displays the correct x- and y-coordinate location of the insertion point in the reference area to the left of the formula bar. The x-coordinate refers to the horizontal location of the insertion point; the y-coordinate refers to the vertical location.

To quickly change the position of a field

▶ Drag the field to a new position.

Positioning in form doesn't affect list view
Positioning a field in form view has no affect on the same field in list view.



To move a field in form view, click the field. The pointer changes to a small hand to indicate you can move the field. While holding down the mouse button, drag the field to a new location.

To precisely change the position of a field

1 Highlight the field you want to change.

2 From the Edit menu, choose Position Field.

3 Use the arrow keys to move the highlight to the new location.

4 Press ENTER to confirm the new position.

To turn on Snap To Grid

▶ From the Options menu, choose Snap To Grid.

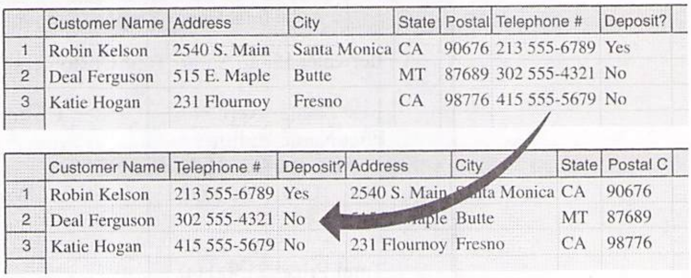
When the Snap To Grid command is chosen, a mark is displayed by the command name on the Options menu. To turn off Snap To Grid, choose the command again.

Moving a field in list view

If you decide you want to rearrange fields in list view so that they are displayed in the window in a clear and logical way, you can move the fields into any order you want.

Moving fields in list doesn't affect form

Moving a field in list view has no affect on the position of the same field in form view.



You can move these two fields closer to the customer name field to make it easier to find the information you need.

	Customer Name	Address	City	State	Postal	Telephone #	Deposit?
1	Robin Kelson	2540 S. Main	Santa Monica	CA	90676	213 555-6789	Yes
2	Deal Ferguson	515 E. Maple	Butte	MT	87689	302 555-4321	No
3	Katie Hogan	231 Flournoy	Fresno	CA	98776	415 555-5679	No

	Customer Name	Telephone #	Deposit?	Address	City	State	Postal C
1	Robin Kelson	213 555-6789	Yes	2540 S. Main	Santa Monica	CA	90676
2	Deal Ferguson	302 555-4321	No	[illegible] Maple	Butte	MT	87689
3	Katie Hogan	415 555-5679	No	231 Flournoy	Fresno	CA	98776

To move a field in list view

1 Highlight the entire field you want to move.

2 Press SHIFT+DEL.
–or–
From the Edit menu, choose Cut.

When Works asks if you want to delete the data in the field, choose the OK button. Works will insert the data in its new location when you choose the Paste command in step 4.

3 Highlight the entire field where you want to insert the field.

4 Press SHIFT+INS.
–or–
From the Edit menu, choose Paste.

The field is moved to the new location, directly to the left of the field you highlighted in step 3.

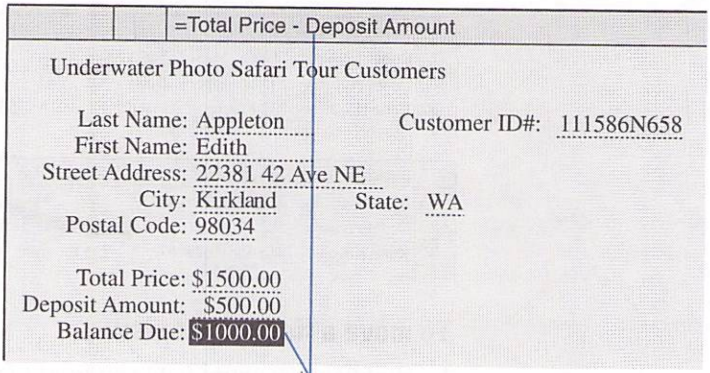
Using mathematical formulas and functions to create calculating fields

For more information on formulas, operators, and functions, see "Entering a formula" on page 104.

Database formulas have two primary purposes:

- To calculate the contents of one field based on the contents of another field within a record.
- To create proposed responses in a field where one condition is most likely to be true.

For example, you could calculate a field that shows a salesperson's commission by typing **=rate*sales** in a Commission field where Rate is the name of the field that contains the commission percentage the salesperson receives and Sales is the name of the field that contains the salesperson's total monthly sales. Works multiplies the value in the Rate field by the value in the sales field to calculate a salesperson's commission, all within an individual record. The following illustration shows another example of using a formula to calculate a field entry.



=Total Price - Deposit Amount

Underwater Photo Safari Tour Customers

Last Name: Appleton
First Name: Edith
Street Address: 22381 42 Ave NE
City: Kirkland
Postal Code: 98034
Customer ID#: 111586N658
State: WA

Total Price: $1500.00
Deposit Amount: $500.00
Balance Due: $1000.00

When you insert a formula into a record, the result of the formula is displayed in the field, while the formula that produced the result is displayed in the formula bar.

Calculating a field's contents with a formula

You can have only one formula in each database field. Whenever you type a formula into a field, that formula is automatically entered into the same field in all records. When you type information into a new record, the formula automatically creates a value for that field in the new record based on what you typed. Formula values are not displayed in fields in a blank record.

A formula can refer to other fields within a single record and can calculate a value using information in one or more fields.

To enter a formula that calculates a field's contents

Using a formula to get information from all records
You can also use formulas to perform calculations on the entire contents of one or more fields by creating a database report. For example, you could sum all the values in a field, average all the values in a field, subtract the sum of one field from the sum of another, and so on. For more information, see "Guide to Database Reporting" on page 313.

1 Highlight the field in which you want to type the formula.

2 Type an = (equal sign) followed by the formula.

Example: Type **=price-deposit** (names of fields that contain the total price of the trip and the deposit paid) into a field named Total Due to create a formula that calculates the total amount due for a vacation.

When you type a formula into a field, Works automatically places the same formula in that field in all records.

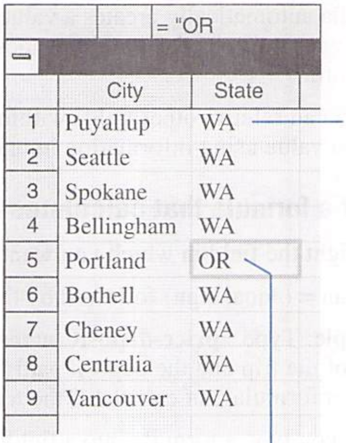
3 Press TAB to move to the next field; or press ENTER to stay in the field.

The result of the formula is displayed in the field and the formula appears in the formula bar. If the fields you are using to compute the value are empty, the value will be 0 until one of the fields in the formula has contents.

Using a formula to propose a field entry

A formula is also useful for automatically entering any piece of information that is not likely to change from record to record, such as a paid or owing status in a customer balance sheet or a country or postal code in a mailing list.

For example, suppose most of your organization's members live in California. Rather than type **CA,** the abbreviation for California in most of the State/Province fields, you can type the formula **="CA** Each time you create a new record, the State/Province field already has **CA** entered in it. If a certain record needs to contain "BC," the abbreviation for British Columbia, in the State/Province field, you simply type **BC** in place of "CA," which Works proposes.



= "OR

	City	State
1	Puyallup	WA
2	Seattle	WA
3	Spokane	WA
4	Bellingham	WA
5	Portland	OR
6	Bothell	WA
7	Cheney	WA
8	Centralia	WA
9	Vancouver	WA

If the majority of the entries in a certain field are identical, you can avoid repetitive typing by using a formula to propose field entries.

If one of the entries is different from the rest, you can simply type in the correct information.

To enter a formula that proposes a field entry

1 Highlight the field in which you want to place the formula.

Text in multiple fields
If you want text to appear in multiple fields, you must type double-quotation marks (") after the equal sign and before the text. For example, type **="Australia** *to have "Australia" entered in each field.*

2 Type = (equal sign) followed by the entry you propose for all records that contain this field.

Example: Type **=206** if you expect that most entries in a field will contain the 206 telephone area code.

3 Press TAB to move to the next field, or SHIFT+TAB to move to the previous field.

The result of the formula appears in the field in each record in your database. You can type over the entry in any field that needs to display a different entry.

Using functions in a formula

For information on the functions available with Works, see "Appendix A: Database and Spreadsheet functions" on page 371.

A function is a built-in mathematical equation. Works has 57 functions you can use, some of which are very useful in a database. Functions save time when you are typing a complex formula.

For example, a teacher could use the AVG (average) function to compute each students' average score on a series of tests. The formula might look like this: =AVG(test score 1, test score 2, test score 3).

To enter a formula that uses a function

Formulas with functions need parentheses
When you use a function in a formula, be sure to enclose the values or references you want the formula to evaluate within parentheses. Otherwise, Works will display an error message.

Formula displays in the formula bar
Works displays the result of your formula in the field while the formula that produced the result is displayed in the formula bar. See "Making changes to a field entry" on page 249 for a complete list of the keys you can use to edit in the formula bar.

1. Highlight the field in which you want to type the formula.
2. Type = (equal sign) followed by the function you wish to use.

   Example: Type **=avg**
3. Within parentheses, type the names of the fields with which you want the function to calculate.

   Example: Type **=avg(Test score 1, Test score 2, Test score 3)**
4. Click the Enter box in the formula bar.
   –or–
   Press ENTER.

Clearing a formula from a field

You can clear a formula you no longer need from a field so that you can type new information in the field.

To clear a formula

1. Highlight the field that contains the formula you want to clear.

   In list view, highlight the entire field you want to clear.
2. From the Edit menu, choose Clear Formula.

Using dates and times in a database

How Works calculates dates and times
Works actually uses serial numbers to calculate dates and time. If you type a date or time that Works does not recognize as a date or time into a cell that is not formatted for date or time, you will see this serial number. Format the cell to see the date or time format.

International dates and times
Date and time formats are displayed according to which country you have chosen in the Windows Control Panel International dialog box. If you have selected United Kingdom as the country and English (International) as the language, the month-day-year format is changed to day-month-year. For more information on changing the country setting, see your Windows documentation.

You can type dates and times in a database and use them in formulas. Once you type a date or time in a format Works recognizes (see the following table), the field retains that format until you change it by choosing a different format from the Format menu. You can also change the format of an entire field before you enter any information into it.

Works also let's you enter the current date or time without typing it. For example, you can log the date and time you began to work on a project.

The Works calendar begins with the date January 1, 1900 and ends with June 3, 2079. If you use a date or time outside this range, Works interprets it as text.

The following table shows the date and time formats you can use:

Format		**Example**
Long	Month, day, year	October 30, 1960
	Month, year	October 1960
	Month, day	October 30
	Month only	October
Short	Month, day, year	10/30/60
	Month, year	10/60
	Month, day	10/30
24-hour	Hour, minute, second	14:30:00
	Hour, minute	14:30
12-hour	Hour, minute, second	2:30:00 PM
	Hour, minute	2:30 PM

To quickly enter a date or time

1 Type the date or time you want to enter in any of the formats in the preceding table.

If Works displays the serial number rather than the date or time you expect, use the procedure that follows to format the field.

Example: Type **10/30/60**

2 Click the Enter box in the formula bar.
–or–
Press ENTER.

Works displays the date according to how the field is formatted.

Example: Works displays what you typed, 10/30/60, if the field has not been formatted with a specific date format, or Works displays October 30, 1960 if you previously formatted the field to display the long format for month, day, years.

To change the date or time format of a field or entry

1. Highlight the field or entry you want to change.
2. From the Format menu, choose Time/Date.
3. Choose the date or time format you want.
4. Choose the OK button.

To enter the current date or time

1. Highlight the field in which you want the date or time.

   If you enter the current date or time in the following way, the date will not change.

2. Press the appropriate shortcut keys:

To	Press
Enter the date	CTRL+; (semicolon)
Enter the time	CTRL+SHIFT+; (semicolon)

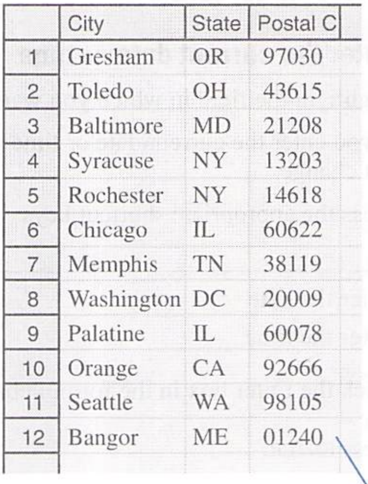
3. Click the Enter box in the formula bar.
   –or–
   Press ENTER.

Organizing your records in alphabetical or numerical order

You can organize the records in your database in alphabetical or numerical order. For example, you can sort the records in order to:

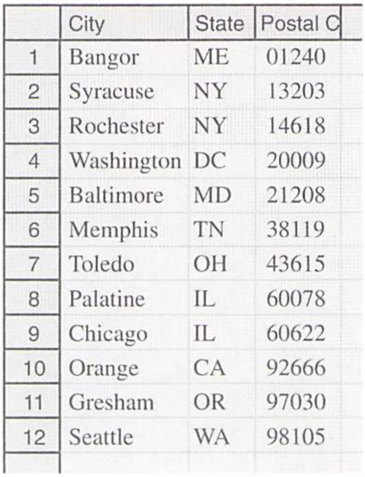
- Run mailing labels in postal-code order.
- Print names in alphabetical order.
- Catalog items in price order.

A field of postal codes before sorting.



	City	State	Postal C
1	Gresham	OR	97030
2	Toledo	OH	43615
3	Baltimore	MD	21208
4	Syracuse	NY	13203
5	Rochester	NY	14618
6	Chicago	IL	60622
7	Memphis	TN	38119
8	Washington	DC	20009
9	Palatine	IL	60078
10	Orange	CA	92666
11	Seattle	WA	98105
12	Bangor	ME	01240

The same field after sorting.



	City	State	Postal C
1	Bangor	ME	01240
2	Syracuse	NY	13203
3	Rochester	NY	14618
4	Washington	DC	20009
5	Baltimore	MD	21208
6	Memphis	TN	38119
7	Toledo	OH	43615
8	Palatine	IL	60078
9	Chicago	IL	60622
10	Orange	CA	92666
11	Gresham	OR	97030
12	Seattle	WA	98105

Be sure to format numbers that begin with 0 (zero) with the Leading Zeros command from the Format menu. Otherwise, Works deletes leading zeros.

Sorting more than three fields
To sort more than three fields, sort the database twice, specifying the least important sort fields the first time you sort and the more important fields the second time you sort.

Works can sort on one, two, or three fields at a time. When you specify more than one field to be sorted, specify the most important field you want sorted first.

For example, in a database that contains a Last name and First name field, you would instruct Works to sort on the Last name field first and then, if there are any duplicates in that field, to sort based on the contents of the First name field.

The result would be a list that has last names in alphabetical order and then if there were more than one person with the same last name, those names would be listed alphabetically, based on first names.

How Works sorts text
Works sorts text without respect to capital or lowercase letters. For example, "Adam" is placed after "ace" in an ascending order sort. The capital letter "A "does not affect the sorting order.

If the selection you are sorting contains a mixture of numbers, text, times, and dates, Works groups all text, dates, times, and numbers during the sort. In an ascending sort, they are sorted in the following order: text, times, numbers, and then dates. In a descending sort, they are sorted in the following order: dates, numbers, times, and then text. In both ascending and descending sorts, Works places blank entries after all other sorted entries.

You can repeat a sort if you want to add new records and want them organized properly.

To sort a database in alphabetical or numerical order

1. From the Select menu, choose Sort Records.

   Works proposes the first field of your database as the first sort field.
2. Under 1st Field, type the name of the first field to be sorted if you want to sort on a field other than the one Works suggests.
3. Choose either the Ascend or Descend option.
4. Type the names for the second and third fields if you want to sort on more than one field.
5. Choose the OK button.

To repeat a previous sort

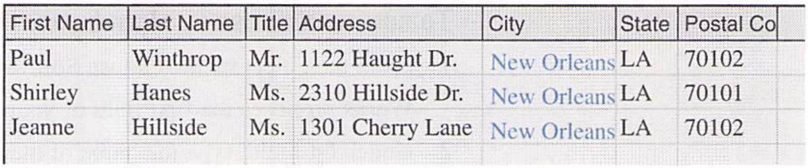
1. From the Select menu, choose Sort Records.
2. Choose the OK button.

Searching a database to find a group of records

For information on performing more detailed searches, see "Querying a database for related records" on page 274.

Sometimes you may need to locate a specific record or piece of information in a database. For example, you may need to find all the records that contain the words "New Orleans." You can use the Find command from the Select menu to find any records containing these words. Works hides the records that do not match the search.

You can search a database to find the records of all your customers who live in a certain city. For example, a search through a database for all records that contain "New Orleans" produces this result.



First Name	Last Name	Title	Address	City	State	Postal Co
Paul	Winthrop	Mr.	1122 Haught Dr.	New Orleans	LA	70102
Shirley	Hanes	Ms.	2310 Hillside Dr.	New Orleans	LA	70101
Jeanne	Hillside	Ms.	1301 Cherry Lane	New Orleans	LA	70102

When searching, you can also use wildcards to find information that is similar but does not match exactly. For example,you could use a wildcard to find all the last names spelled both "Anderson" and "Andersen."

To search a database

List view shows search results
Use list view to see the results of a search or to highlight the field or column you want to search.

1. From the Select menu, choose Find.
2. In the Find What box, type the text you want to search for.
3. Choose either the Next Record or All Records option button.

   When you choose the Next Record option, Works finds the next occurrence of the search text, but no records are hidden.

   When you choose the All Records option button, Works displays all the records containing the search text and hides the records that do not match.
4. Choose the OK button.

To repeat the previous search

▶ Press F7.

To display the records that were not found during a search

- From the Select menu, choose Switch Hidden Records.

  Works hides the records found in the search and displays the hidden records.

To display all records after a search

- From the Select menu, choose Show All Records.

Searching to find information that is similar, but not exactly the same

Wildcards are a tool to help you find fields or records whose contents are similar, but not exactly the same.

The two wildcards are the asterisk (*) and the question mark (?).

The question mark (?) represents any single character in the same position in a word as the question mark. For example, if you want to find a name, but are unsure whether the name is Grunlund or Grunland, type **grunl?nd** in the Find What box. Works finds both names.

The asterisk (*) stands for any number of characters in that same position. For example, if you type **s*p** in the Find What box, Works finds all words that begin with an "s" and end with a "p," such as sip, strap, and stump.

Because Works searches without regard to whether it is searching for a whole word or a group of letters within a word, Works also finds text with the s*p sequence within a word—Works finds "usurp," "insipid," "sloppy," and "stupid" in the same search that locates "sip," "strap," and "stump." Be as specific as you can when you define your search to avoid running lengthy searches that find more than what you're looking for.

Querying a database for related records

For a tutorial, press SHIFT+F1 and go to the "Advanced Searching" lesson in the Database section of the tutorial.

What records does a query search?
When you query a database, Works searches all the records, including hidden ones. It selects the records that match, and hides the records that do not match.

Hiding individual records
You can hide individual records so that they will not print in a report. See "Reversing and changing the effects of a query" on page 282.

Before you print a report or view a database, you can define exactly which records you want to see. For example, in a store inventory report, you might want to print only craft items. Or you might want to see a list of only those items purchased before a certain date. You do this by querying the inventory database.

Some of the ways you can select records are:

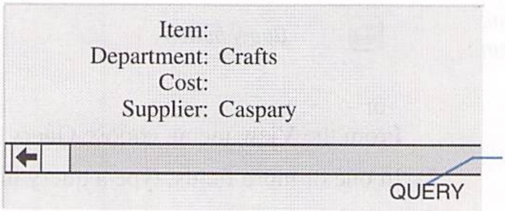
- By exact matches—Select only the records with the last name of Tanner, or only the records with items that have a value of $100.
- By greater-than or less-than comparisons—Select only the records with last names that alphabetically come before Tanner, or select only the records with last names that come after Tanner. Select only the records with items that have a selling price less than $100, or that have a selling price greater than $100.
- By those that fit within a certain range—Select only the records with last names that begin with "S," or select only the records with last names that begin with a letter between "M" and "S." Select only the records with items that have a selling price between $100 and $200.
- By those that have matching entries in more than one field—Select only the records with people who have the last name Tanner and live in London. Or select only the records with people who have the last name Tanner, live in London, and are over 30 years of age.
- By those that do not match one or more specific entries—Select all the records for people who do not live in London, or select items that are not craft items. Select all the records with all the items that are not craft items and were not purchased from Caspary Crafts.

You can also create queries that almost but not quite match, ones that use calculations, find dates, and use Works functions.

Defining which records to select

You select a specific group of records by typing one or more instructions in query fields. Each instruction defines the text or values you want Works to look for.

When you apply this query, Works selects all of the records that have "Crafts" in the Department field and "Caspary" in the Supplier field.

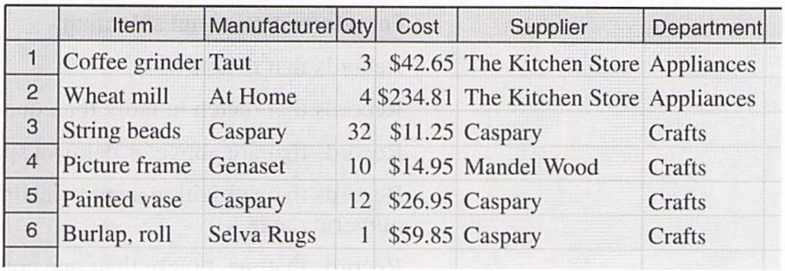


Item:
Department: Crafts
Cost:
Supplier: Caspary

While in Query view, Works displays the word "Query" in the status bar.

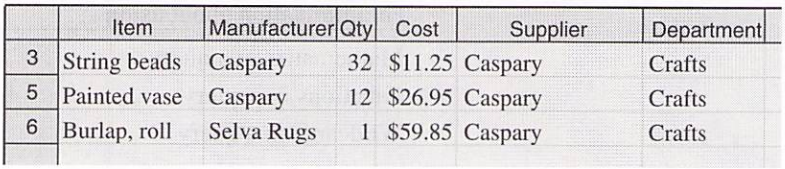
After you apply the query, you can view the results by switching to list view. For example, the following illustration shows the records that Works displays before and after the query.

Before the query…



	Item	Manufacturer	Qty	Cost	Supplier	Department
1	Coffee grinder	Taut	3	$42.65	The Kitchen Store	Appliances
2	Wheat mill	At Home	4	$234.81	The Kitchen Store	Appliances
3	String beads	Caspary	32	$11.25	Caspary	Crafts
4	Picture frame	Genaset	10	$14.95	Mandel Wood	Crafts
5	Painted vase	Caspary	12	$26.95	Caspary	Crafts
6	Burlap, roll	Selva Rugs	1	$59.85	Caspary	Crafts

…after the query to find items from Caspary



	Item	Manufacturer	Qty	Cost	Supplier	Department
3	String beads	Caspary	32	$11.25	Caspary	Crafts
5	Painted vase	Caspary	12	$26.95	Caspary	Crafts
6	Burlap, roll	Selva Rugs	1	$59.85	Caspary	Crafts

To type and apply a query

Query view is a blank form
The query view window looks like form view, but each field is blank until you type a query instruction.

1 On the Toolbar, click the Query button.

Query button

–or–
From the View menu, choose Query.

2 In one or more fields, type a query instruction.

For help on typing a specific type of query instruction, see the tables following step 4.

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

4 Switch to the list view or to a preview of a report when you want to see the results of your query.

For information about selecting	See page
Records that match	277
Records that match in more than one field	277
Records that are above or below a specific value	277
Records that are within a specific alphabetic or numeric range	278
Records that meet more than one condition	278
Records that do not match one or more conditions	279

For information about using	See page
Mathematics in a query	280
Functions in a query	281
Wildcards in a query	281

To view the results of a query

Want to view the records that do not match a query?
You can view or print the records that do not match a query. See "Reversing and changing the effects of a query" on page 282.

▶ Switch to list view.

Works displays the records that your query selected. It hides all other records.

Selecting records that match

The simplest type of query is one that selects records that exactly match text or a value—a query that selects all records where the last name is Tanner or that selects all records for people who live in London.

Item:
Department: Crafts
Cost:
Supplier:

This query will select all the records for items in the Crafts department.

You could also select all the records that have 100 in the value field.

Item:
Department:
Cost: 100
Supplier:

This query will select all the records for items that cost $100.

Selecting records that match in more than one field

You can create queries that are more precise by typing instructions in more than one field.

First Name:
Last Name: Tanner
Age: 30
Address:

This query will select all of the records where the last name is Tanner and the age is 30.

First Name: Anita
Last Name: Tanner
Age: 30
Address:
City: London

This query will select only the records where the first name is Anita, the last name is Tanner, the age is 30, and the city is London.

Capitalization
Works does not distinguish between capitalized and noncapitalized letters in a query. If you type the name **Tanner** *Works looks for any combination of capitalized and noncapitalized characters—Tanner, tanner, tAnNer, or TANNER.*

Selecting records that are above or below a specific value

You can use the greater-than operator (>) and the less-than operator (<) to select records that fall above or below a numeric or alphabetic position. For example, you could select all the records where last names start with any letter before "M," or where last names start with any letter after "T." You could select all inventory items that have a value less than $100, or that have a value greater than $1000.

Currency values
When querying for currency values, you do not need to include the currency symbol in the instruction.

To select records that come before a specific word or letter, or to find records that come before a specific value, use the less-than operator (<).

First Name:
Last Name: <"T"
Age:
Address:

This query will select all the records where the last name starts with a letter that precedes "T" in the alphabet.

To select records that come after a specific word or letter, or to find records that come after a specific value, use the greater-than operator (>).

First Name:
Last Name:
Age: >30
Address:

This query will select all of the records where the age is greater than 30.

Selecting records within a specific alphabetic or numeric range

Put quotation marks around text
Any text used in a query instruction must be enclosed within double quotation marks (").

By combining greater-than and less-than operators and the AND logical operator (&) in one instruction, you can select records with text or values that fall within a specific range.

First Name:
Last Name: >"B"&<"D"
Age:
Address:

This query will select all of the records where the last name begins with "B" or "C".

Item:
Model:
Number:
Quantity: >5&<10

This query will select all of the records where quantity is between 5 and 10 (is greater than 5 and less than 10).

Selecting records that meet several conditions

The OR may look different
The OR operator may be displayed as | or ¦ depending on your keyboard.

The AND (&) and OR (¦) logical operators make it possible for you to include multiple comparisons in one instruction.

For example, using the AND operator, you can select only those records that meet all of several conditions.

This query will find all of the records where the last name is Tanner, the city is London, and the age is 30.

```
 First Name:
 Last Name: =Last Name="Tanner"&City="London"&Age=30
       Age:
   Address:
      City:
```

Using the OR operator, you can select records that meet any one of several conditions.

This query will find all of the records where the last name is Ben, Bendel, or Bennet.

```
 First Name:
 Last Name: =Last Name="Ben"¦="Bendel"¦="Bennet"
       Age:
   Address:
      City:
```

You can also combine AND and OR in an instruction. For example, you could select records that meet either of two conditions and also meet a third condition.

This query will find all of the records where the last name is Gabor or Gabour and the city is Paris.

```
 First Name:
 Last Name: =Last Name="Gabor"¦"Gabour"&City="Paris"
       Age:
   Address:
      City:
```

Selecting records that do not match a specific condition

If you want to select records that contain anything except specific text or a specific value, you can use the NOT EQUAL operator (<>) or the NOT operator (~).

Both these queries will select all the records where the item is not in the Crafts department.

Item:
Department: <>"Crafts"
Cost:

Item:
Department: =~(="Crafts")
Purchase Value:

You can use the NOT EQUAL and NOT operators with values.

Both these instructions will select all the records where the Quantity on hand is not 0 (zero).

Item:
Location:
Stock Number:
Quantity on hand: <>0

Item:
Location:
Stock Number:
Quantity on hand: =(~(=0))

Using mathematics in a query

Using mathematical operators, you can perform calculations on which to base a query instruction. Use field names to specify which fields the calculation is being computed from. The mathematical operators you can use are:

Grouping instructions
You can use parentheses to group conditions in an instruction. For example, in the instruction: =~(Deposit>1500|Last Name="tanner"), the NOT operator applies to all the conditions enclosed by parentheses.

Operator	Example
+ (Addition)	=(Salary+Commission)<2500 Selects the records where the salary plus commission is less than $2,500.00.
– (Subtraction)	=(Income–Expenses)>0 Selects the records where the result of subtracting expenses from income is greater than zero.
* (Multiplication)	=(Hours*Salary)>1000 Selects the records where hours worked times salary is greater than $1000.00
/ (Division)	=(Miles/Gallons)>30 Selects those records where the miles per gallon is over 30.
^ (Exponentiation)	=(22/7)*(radius^2)>100 Selects the records where the area of a circle is greater than 100.

Using Works functions in a query

You can use many other Works functions in query instructions. For a complete reference to functions, and for additional examples, see "Appendix A : Spreadsheet and Database functions" on page 371.

Works functions help you perform complicated calculations without having to create long formulas. For example, to select all payments due in March, use the Works month function in the following formula: =MONTH()=3.

Some other examples of using functions in query instructions are:

Task	**Example**
To select all records containing jobs that should be completed as of the current date	=<NOW() Use the NOW function to compare record dates with the current date.
To select all records where the value in a field is approximately 15	=ROUND(value,0)=15 Use the ROUND function to round values (to round numbers up between 14.5 and 15, and to round numbers down between 15 and 15.5).
To select all records where the value in one field is less than the square root of the value in another field	=SQRT(density)<measure Use the SQRT function to calculate the value for the comparison.
To select all the records where the area of a circle is greater than 100	=PI()*(radius^2)>100 Use the PI function to help calculate the area of a circle.

Using wildcards in a query instruction

A wildcard is a character that substitutes for one or more characters in a word. Works uses the question mark (?) and the asterisk (*) as wildcards.

A question mark substitutes for any single character in the same position as the question mark. For example, to find both "Anderson" and "Andersen" in a query, type **anders?n**

An asterisk substitutes for any number of characters in the same position as the asterisk (including no characters at all). For example, to find all the names that begin with "Ben," followed by any number of characters ("Ben," "Bendel," "Benson," "Benedict," and so on), type **ben***

Other examples of using wildcards in query instructions are:

Task	Example
To select all records that contain grades for Test 1, Test 2, and Test 3.	=Test ? Use the ? wildcard to represent the test number.
To select all recipes that have a name beginning with Apple (Apple pie, Apple cobbler, Applesauce, and so on).	=Apple* Use the * wildcard to represent any letters or words after "Apple."
To select all records that have an address on 123rd Street.	=*123 St* Use the * wildcard to represent any part of the address that comes before "123," and use another * wildcard to represent text that comes after "St" (in case "Street" is not abbreviated).

Reversing and changing the effects of a query

You can reverse the effects of a query in order to view or print the records that a query did not select. When you reverse a query, Works hides the current records and displays the hidden records in their place.

After reversing a query's results, you can reapply the query to view or print the records selected by the query.

You can also hide individuals records so they will not be included or printed.

To show hidden records

- ▶ From the Select menu, choose Switch Hidden Records.

  Works displays the records not selected by the query.

To show all records

- ▶ From the Select menu, choose Show All Records.

  Works displays all the records in the database. To see only the results of the query again, reapply the query.

To reapply the last query

- ▶ From the Select menu, choose Apply Query.

  Works reapplies the query and selects the specified records.

To hide an individual record

1 In list view, highlight the record you want to hide.
–or–
In form view, scroll to the record you want to hide.

2 From the Select menu, choose Hide Record.

Using dates in a query instruction

Works treats dates in query instructions the same as it treats numeric values. For example, Works can find dates that fall before or after the date you specify. It can also subtract and add dates, then compare the result with a numeric value you specify.

Use single quotation marks when typing dates
When you use a date in a query instruction, you must enclose it in single quotation marks (').

If you omit an element when typing a date—for instance, if you type the month and day but leave off the year ('6/21')—Works assumes you mean the current year ('6/21/91').

Following are some examples using dates in query instructions:

Task	Example
To select all records for items purchased October 30, 1980 or later	>='10/30/80'
To select all records for items purchased on or between October 30, 1980 and October 30, 1990	>='10/30/80'&<='10/30/90'
To select all records for payments due in March	=(MONTH()=3)
To select all records where your customer owes more than $100 and the bill is more than 30 days past due	=Balance>100&(Now()–Due Date)>30

Changing or deleting a query

Editing instructions
You can edit instructions in the same way you edit Report and Database entries. For more information, see "Making changes to a field entry on page 249.

After you define and apply a query, Works retains the query instructions and, if you change some records or add new ones, you can apply the query again.

When you switch to the query screen, Works displays any previous instructions. If you want to change the instructions, you can either edit them or delete the entire query and start over.

To type over an existing query instruction

1. Highlight the instruction you want to change.
2. Type a new instruction.

To clear one query instruction

1. Highlight the instruction you want to clear.
2. From the Edit menu, choose Clear Field Entry.

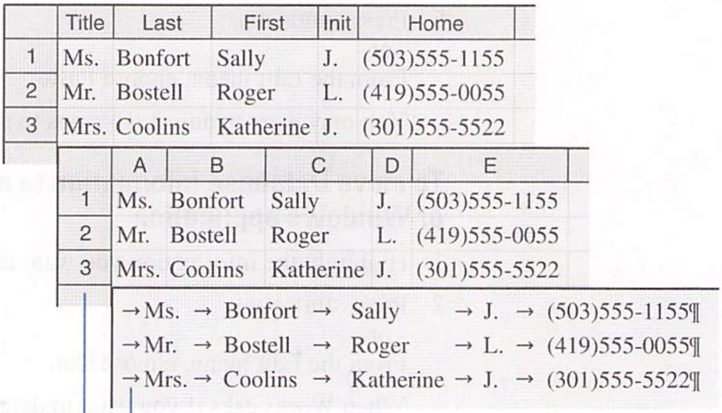
To delete all query instructions

▶ From the Edit menu, choose Delete Query.

Copying or moving entries to another Works tool

You can highlight and copy or move database entries to a Word Processor document or spreadsheet, or to another Windows version 3.0 or later application. Information from the Database is copied or moved to other Works tools as a table.

When you copy information from the Works database to another Works tool or Windows application…



	Title	Last	First	Init	Home
1	Ms.	Bonfort	Sally	J.	(503)555-1155
2	Mr.	Bostell	Roger	L.	(419)555-0055
3	Mrs.	Coolins	Katherine	J.	(301)555-5522

	A	B	C	D	E
1	Ms.	Bonfort	Sally	J.	(503)555-1155
2	Mr.	Bostell	Roger	L.	(419)555-0055
3	Mrs.	Coolins	Katherine	J.	(301)555-5522

→Ms. → Bonfort → Sally → J. → (503)555-1155¶
→Mr. → Bostell → Roger → L. → (419)555-0055¶
→Mrs. → Coolins → Katherine → J. → (301)555-5522¶

…in a Word Processor document, each field is separated by a tab mark and each record ends with a paragraph mark.

…in a spreadsheet, each field becomes a column and each record becomes a row.

You can also copy or move information into the Database from a Works Word Processor document or Spreadsheet, or from another Windows version 3.0 or later application. If you copy or move information from the Works Spreadsheet or another spreadsheet application, each column becomes a field and each row becomes a record. If you copy information from a Works Word Processor document or another word processor application, each paragraph is inserted into it's own field.

To copy Database information to another Works tool or Windows application

1 Highlight the information you want to copy.

2 Press CTRL+INS.
–or–
From the Edit menu, choose Copy.

3 Open or switch to another Works document or another Windows version 3.0 or later application.

4 Move the highlight or insertion point to where you want the copy.

5 Press SHIFT+INS.
–or–
From the Edit menu, choose Paste.

You may want to adjust tab stops to make the columns line up.

To move Database information to another Works tool or Windows application

1 Highlight the information you want to move.

2 Press SHIFT+DEL.
–or–
From the Edit menu, choose Cut.

When Works asks if you want to delete all the information in a field or record, choose the OK button. The information will be inserted in its new location after you choose the Paste command.

3 Open or switch to the Works document or Windows version 3.0 or later application.application

4 Move the highlight or insertion point to where you want the copy.

5 Press SHIFT+INS.
–or–
From the Edit menu, choose Paste.

You may want to adjust tab stops to make the columns line up.

To copy or move information from another Works tool or Windows application

1. In another Works document or another Windows version 3.0 or later application , highlight the information you want to copy or move.
2. Press CTRL+INS to copy, or SHIFT+DEL to move.
   –or–
   From the Edit menu, choose Copy or Cut.
3. Open or switch to a Works database.
4. Move the highlight to where you want the information to be inserted.
5. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

Protecting a database

After you have designed a database and entered information into it, you can protect both the form design and its contents from changes.

Initially, Works locks all fields and field entries in a database but, until you turn on protection, the lock has no effect. When a field is locked and protection is on, you cannot format it, change any of its entries, or unlock it.

To protect some fields or field entries but not others, unlock the fields or field entries you do not want to protect, and then turn on protection.

If you use the Protect Data command from the Options menu to turn on the locks, the locked fields cannot be changed. Even though you have protection turned on, unlocked fields can still be changed.

To unlock or lock a field

Want to protect some fields or field entries but not others?
Protecting some fields or field entries but not others is a two-step process. First, you unlock the fields or field entries you do not want to protect. Second, you turn on protection for the remaining fields or field entries.

1. Highlight the field you want to unlock or lock.
2. From the Format menu, choose Style.
3. Choose the Locked check box.

   The option is on if an X is displayed in the Locked check box. Choosing it again turns it off.
4. Choose the OK button.

To turn on protection on or off

Before you lock or unlock
Be sure that protection is turned off.

Moving the highlight with protection on
With protection on, you can use the TAB and SHIFT+TAB keys to move the highlight to only the unlocked fields.

▶ From the Options menu, choose Protect Data.

When Protect Data is chosen, a mark is displayed beside the command name on the Options menu. To turn off Protect Data, choose the command again.

Protecting the form design

Your form design includes the field names, field locations, field sizes, and any labels in form view. You can protect the form design and still be able to enter and edit the contents of each field. This is particularly useful if you design a database form and someone else enters the information.

When you protect the form design, you cannot edit field names and labels or change their format or size. You also cannot move or copy field names or labels. This way, the person who is entering the information in form view can't accidentally change the layout of the form.

To protect the form design

- From the Options menu, choose Protect Form.

  When the Protect Form command is turned on, a mark is displayed beside the command on the Options menu. To turn off Protect Form, choose the command again.

Numbering pages and creating headers and footers

When you print database information, you may want to number the pages or add a title or the date you are printing the information. Use headers and footers to add page numbers or other text to each printed page.

A header is text that appears at the top of every printed page of a database.

A footer is text that appears at the bottom of every printed page.

When you choose to create headers or footers, you can:

- Print only page numbers either at the top or bottom of each page.
- Print page numbers, along with a header, footer, or both.
- Print headers, footers, or both without page numbers.

To insert page numbers

1. From the Edit menu, choose Headers & Footers.
2. Choose from the following:

To insert page numbers	Type
Centered at the top of the page	**&p** in the Header box
Centered at the bottom of the page	**&p** in the Footer box
Right-aligned at the top of the page	**&r&p** in the Header box
Left-aligned at the top of the page	**&l&p** in the Header box
Right-aligned at the bottom of the page	**&r&p** in the Footer box
Left-aligned at the bottom of the page	**&l&p** in the Footer box

To change the starting page number

1. From the File menu, choose Page Setup & Margins.
2. In the 1st Page Number box, type in the number you want printed on the first page.

   Works numbers pages sequentially, beginning with the number you specify.
3. Choose the OK button.

To remove page numbers

1. From the Edit menu, choose Headers & Footers.
2. Delete the page number text in the Header and Footer boxes by highlighting it and pressing DEL.
3. Choose the OK button.

Creating a header or footer

Works provides special header and footer codes, which can be used in a variety of combinations to create headers and footers. For example, you can type **&lAddress&cPage - &p&r&d** to create a header that looks like this:

Address Page - 2 10/31/91

To create a header or footer

Headers and footers don't display
The text for a header or footer is not displayed in your window, but you can see it when you print or preview the database.

You don't have to use codes
If you prefer, you can simply type text in the Header and Footer boxes. For example, type **Jones Family Inventory** *in the Header box to create a header across the top of each page of your printed database.*

1. From the Edit menu, choose Headers & Footers.
2. Type text in the Header and Footer boxes.

   You can include any of the following special header and footer codes:

To	Type
Print the page number	**&p**
Print the filename	**&f**
Print the current date	**&d**
Print date in long format	**&n**
Print the current time	**&t**
Print a single ampersand character	**&&**
Align the characters that follow with the left margin	**&l**
Align the characters that follow with the right margin	**&r**
Center the characters that follow between the margins	**&c**

3. Choose the OK button.

To remove a header or footer from the first page

1. From the Edit menu, choose Headers & Footers.
2. Choose the No Header On 1st Page or No Footer On 1st Page check box.
3. Choose the OK button.

To remove all headers and footers

1. From the Edit menu, choose Headers & Footers.
2. If there is text in the Header box, highlight it, and then press DEL.
3. If there is text in Footer box, highlight it, and then press DEL.
4. Choose the OK button.

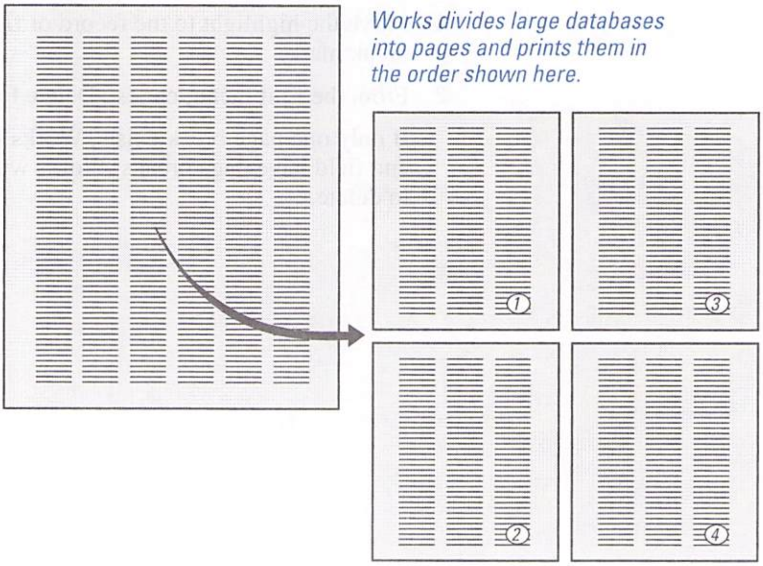
Setting a page break

When you print more information than fits on one sheet of paper, Works automatically separates the information into pages. If you want to specify exactly what information appears on each page, you can set your own page breaks. When you do, a page break mark appears where a new page begins.

Works automatically prints one record per page in form view. If a record is two or more pages long when printed, Works begins printing the next record on a new sheet of paper.

You also have the option of setting manual page breaks in form view, if, for example, you want to print each record on more than one page. The page breaks you insert are indicated by a dashed line.

In list view, you can insert both vertical and horizontal page breaks that are just like page breaks in the Spreadsheet; pages print in the order shown below:



Works divides large databases into pages and prints them in the order shown here.

To insert a page break in form view

Page breaks in list and form view are independent
The page breaks in form view do not affect page breaks in list view, and vice versa.

1 Highlight an entry in the line below which you want to insert the page break.

2 From the Edit menu, choose Insert Page Break.

A dashed page-break line is displayed.

To delete a page break in form view

1. Move the highlight or insertion point to the line containing the page break mark.
2. From the Edit menu, choose Delete Page Break.

To insert a page break in list view

1. To insert a horizontal page break, highlight the entire record where you want the page break.

   –or–

   To insert a vertical page break, highlight the entire field where you want the page break.
2. From the Edit menu, choose Insert Page Break.

   A dashed page-break line is displayed above or to the left of the record or field.

To delete a page break in list view

1. Move the highlight to the record or field containing the page break mark.
2. From the Edit menu, choose Delete Page Break.

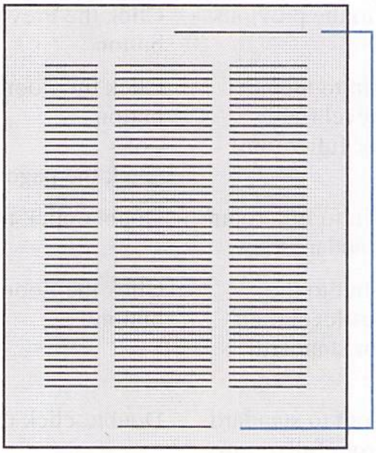
   If only one page break exists, Works will delete it. If both the record and field have page breaks, Works will ask which one you want to delete.

Previewing a database

For information on how to change page margins, size, and orientation in preparation for printing, see "Changing page and margin settings" on page 297.

For information on controlling where page breaks occur when you print, see "Setting a page break" on page 293.

You do not have to print a database to see how it will look. Instead, you can preview it using the Print Preview command.



When you choose Print Preview, you can see headers and footers and get an idea of what your document will look like when you print.

In print preview, you can look at each page in three ways:

- In the standard view, Works scales down each page, and you can see an entire page, including any headers and footers.
- In half-zoom view, Works displays the text on each page approximately one-half size.
- In full-zoom view, Works displays the text and objects on each page full-size. Switch database views to preview how the database will print in different views.

To preview a database

▶ On the Toolbar, click the Print Preview button.

Print Preview button

–or–

From the File menu, choose Print Preview.

Works opens the print preview window and displays the first page of the database. Switch database views to preview how the database will print in different views

Moving through a database and viewing pages

In print preview, you can view all the pages of your database, zoom (enlarge) pages in order to see more detail, and scroll zoomed pages in order to see any portion of them. The following table describes how to zoom-in and view database pages.

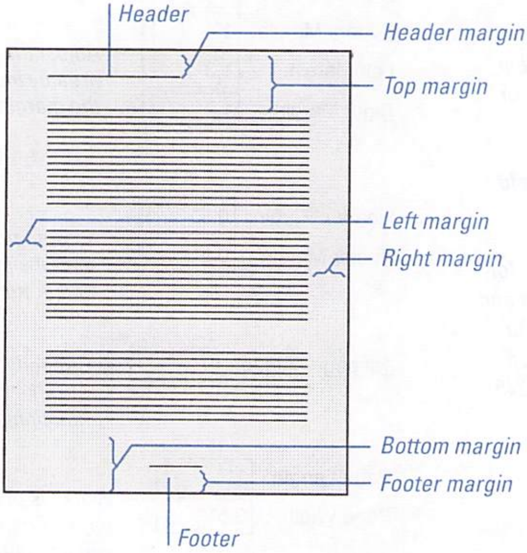
To	With the mouse	On the keyboard
Move to the next page	Click the Next button	Press PAGE DOWN
Move to the previous page	Click the Previous button	Press PAGE UP
Zoom-in to the next zoom level (half-zoom or full-zoom)	Click the Zoom In button –or– Click the page	Press ALT+I
Zoom-in to full-zoom from standard view	Double-click the page	Press ALT+I twice
Zoom-out to the previous level (half-zoom or standard view).	Click the Zoom Out button	Press ALT+O
Zoom-out to standard view from full-zoom	Double-click the page	Press ALT+O twice
View other parts of a zoomed page	Click the scroll bars or drag the scroll button	Press the appropriate arrow key to scroll up, down, right, or left
Print the document	Click the Print button	Press ALT+P
Return to the document window	Click the Cancel button	Press ESC

Changing page and margin settings

Custom page and margin settings
If you regularly use page and printer options other than the Works preset options, you can create a template to set the printer options you want whenever you create a new database. See "Creating a database template" on page 303.

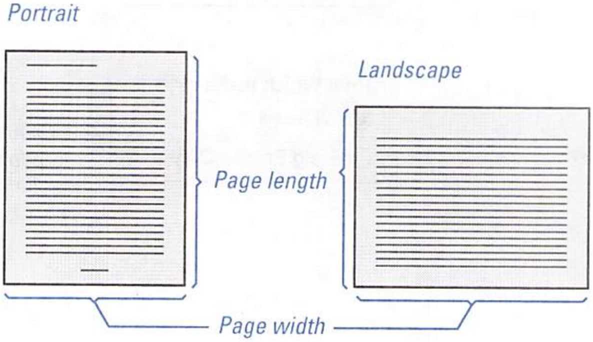
Works remembers page and margin settings
When you change margin settings, Works remembers the settings. You don't have to change them again for that document unless you want to change the way Works prints it.

Page and margin settings determine how Works prints your information on a page. For example, you can change page margins to make room for headers and footers or to leave space for a personal or company letterhead. The page margins you set affect every printed page.



Printing in form view or list view?
If you print from form view, Works prints each record as a form. If you print from list view, Works prints your database in columns and rows. Also, the page setup options you can choose depend on which Database view you are printing from.

You can change page size settings. Works is preset to print on letter-sized (8.5-by-11-inch) paper. But, if you use different-sized paper, you can change the page size to match. For example, you could print on legal-sized paper by typing a page length of 14 inches. You can also choose to print in landscape orientation.



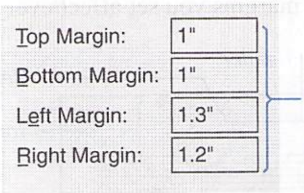
To change page setup and margin settings

1 From the File menu, choose Page Setup & Margins.

2 Type new measurements for any settings you want to change and turn on the options you want to use.

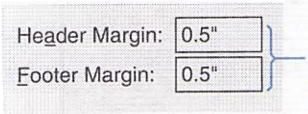
Changing measurement units
You can change the unit of measurement when typing margin or page size by including the appropriate abbreviation after the spacing value—for example: 0.5" for inches, 1.26cm for centimeters, 3pi for picas, or 37pt for points.

Unwanted space between field entires on the same line?
You can close up unwanted spaces between field entries, for example between a City entry and a State entry in an address. For more information see "Hiding a field name or field" on page 245.



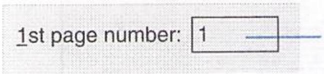
Top Margin: 1"
Bottom Margin: 1"
Left Margin: 1.3"
Right Margin: 1.2"

Adjust the size of a page's print area by increasing or decreasing the margin size.



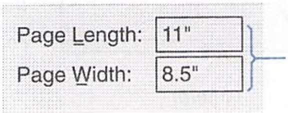
Header Margin: 0.5"
Footer Margin: 0.5"

To print properly, header and footer margins must be smaller than the top and bottom page margins.



1st page number: 1

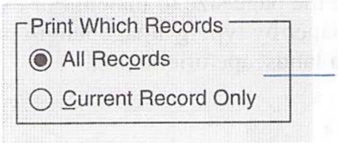
Specify the starting page number. Works numbers the pages sequentially, beginning with the number you specify.



Page Length: 11"
Page Width: 8.5"

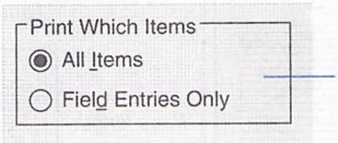
Works is preset to print on 8.5-by-11-inch paper. Change the page measurements if you use different size paper.

Form view options



Print Which Records
● All Records
○ Current Record Only

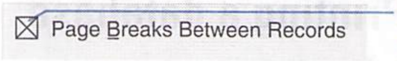
You can choose to print all records or only the current record.



Print Which Items
● All Items
○ Field Entries Only

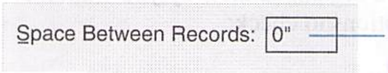
Choose the Field Entries Only option to keep field names and labels from printing.

Printing field lines
You can also choose to print form view field lines.



☒ Page Breaks Between Records

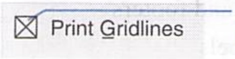
Choose this to print only one record per page. Otherwise, Works prints as many records on a page as fits.



Space Between Records: 0"

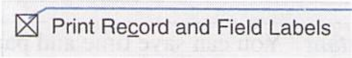
When printing more than one record per page, specify how much space to leave between records.

List view options



☒ Print Gridlines

Choose this option to print gridlines between entries.



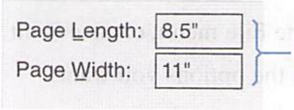
☒ Print Record and Field Labels

Choose this option to print the field names at the top of columns and to print record numbers.

3 Choose the OK button.

To change the page orientation

1 From the File menu, choose Page Setup & Margins.
2 In the Page Setup & Margins dialog box, reverse the measurements for page length and page width.

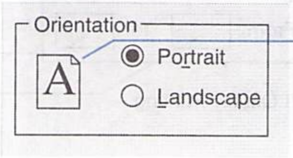


Page Length: 8.5"
Page Width: 11"

For landscape orientation, reverse the normal portrait measurements.

3 Choose the OK button.
4 From the File menu, choose Printer Setup.
5 Choose either the Portrait or Landscape option button if it is available.

Your printer
Not all printers have the orientation option available.



Orientation
● Portrait
○ Landscape

In Portrait orientation, pages are longer than they are wide. In Landscape orientation, pages are wider than they are long.

6 Choose the OK button.

Works will now print all pages in the orientation you chose.

Printing a database

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing" lesson in the Database section of the tutorial.

Before printing, you should make sure your pages are formatted correctly and organized the way you want them. The following table suggests options to check:

To	See page
Check how a database will look when printed by viewing its pages on the screen	295
Specify other fonts and font sizes	253
Specify headers and footers	291
Print mailing labels	73
Print envelopes	75

Important You can save time and paper if you use print preview to check your document before printing. Then, if necessary, adjust page margins, size, orientation, and so on. For information about all page and margin options, see "Changing page and margin settings" on page 297.

Printing options for form view
When you print a database in form view, you can choose to print all records or only the record in the window, to print all items, including field names, field lines, or field contents only, and to print one record per page. To choose any of these options, choose Page Setup & Margins from the File menu, and then choose the appropriate options.

To print a database

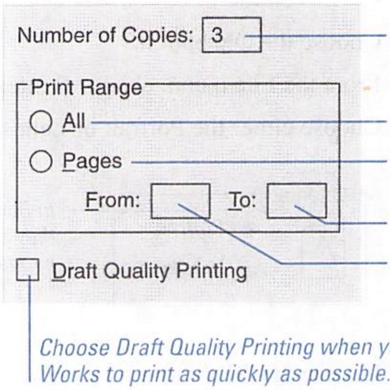
1 On the Toolbar, click the Print button.

🖶 *Print button*

–or–

From the File menu, choose Print.

2 Choose the options you want.



Number of Copies: 3

Print Range

○ All

○ Pages

From: To:

☐ Draft Quality Printing

Type the number of copies of the document you want Works to print.

Choose All to print the entire document.

Choose Pages if you want to print only a portion of the document.

Type the last page to print.

Type the first page to print.

Choose Draft Quality Printing when you want Works to print as quickly as possible.

3 Choose the OK button.

Printing options for list view
When you print a database in list view, you can choose to print gridlines and to print record and field labels. To choose either of these options, choose Page Setup & Margins from the File menu and then choose the appropriate options.

What is draft quality?
When you print using the Draft Quality Printing option, Works does not print font styles (bold, italic, and underline) field lines, or gridlines.

Using report view to print
Report view is extremely useful when you want to print only certain portions of a document (the results of a search, for example), because you can add titles, subtitles, and any other explanatory notes you want. For more information, see "Guide to Database Reporting" on page 313.

Other ways to select records for printing
You can also use the Find command from the Select menu to select groups of related records for printing. For more information on searching, see "Searching a database to find a group of records," on page and "Querying a database for related records" on page 274.

To print only selected records in list view

1. In list view, highlight only the records you do not want to print.
2. From the Select menu, choose Hide Record.

   If the records you do not want to print are not adjacent to each other, you may have to repeat Steps 1 and 2 above.
3. From the File menu, choose Print to print the records you want.

   After you have completed printing, you can choose the Show All Records command from the Select menu to reveal the records you did not want to print.

To print a blank form in form view

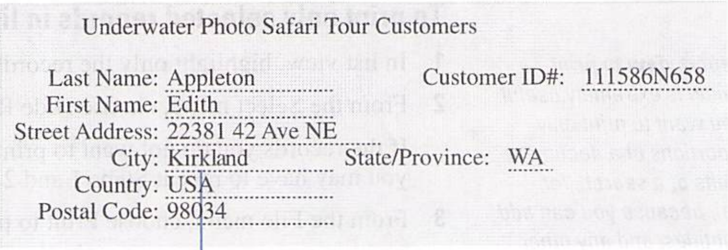
1. Scroll to a blank record.

   You can display a blank record by scrolling to the last record in your database and then pressing CTRL+END or by clicking the right-most Navigation button.
2. From the File menu, choose Page Setup & Margins.
3. Choose the Current Record Only option button.
4. Choose the OK button.
5. On the Toolbar, click the Print button.
   –or–
   Press CTRL+P.

Removing spaces when printing forms

If the width of a field is greater than the number of characters in an entry, space is left before or after the entry, depending on the entry's alignment. If you do not want these blank spaces to print, use the Slide to Left option. Then, when you print your database form, the field entries print without the extra blank spaces. Removing the spaces when you print the forms is especially useful when printing forms that contain addresses.

For information on using the Snap To Grid option when you are positioning fields in form view, see "Positioning and moving fields" on page 262.



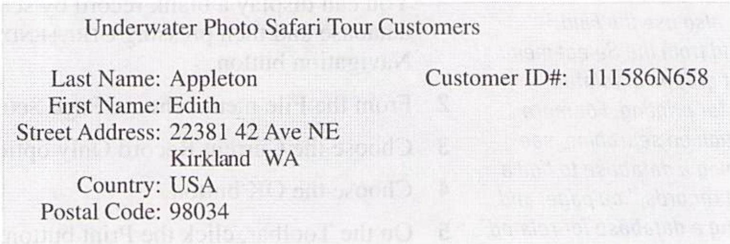
Underwater Photo Safari Tour Customers

Last Name: Appleton
Customer ID#: 111586N658
First Name: Edith
Street Address: 22381 42 Ave NE
City: Kirkland
State/Province: WA
Country: USA
Postal Code: 98034

This City field is 15 characters wide, but "Kirkland" is only eight characters wide.

You can tell Works to remove the extra space between the City field and the State field when the record is printed. First hide the State field name, highlight the State field, and then turn on the Slide-To-Left option.

When you print...
Your form will print like the form in this illustration, although you won't see the affect of removing the spaces on the screen.



Underwater Photo Safari Tour Customers

Last Name: Appleton
Customer ID#: 111586N658
First Name: Edith
Street Address: 22381 42 Ave NE
Kirkland WA
Country: USA
Postal Code: 98034

To slide a field to the left in form view

1 If necessary, hide the field name of the field you want to slide to the left, by highlighting the field entry, and then choosing Show Field Name from the Format menu.

2 Highlight the field or label you want to slide to the left.

3 From the Format menu, choose Style.

4 Choose the Slide To Left check box.

5 Choose the OK button.

Creating a database template

A template is a database you create to reduce the need to do the same work over and over. It can contain standard settings, text, and formats that do not change from database to database.

When you create a template, Works turns on the Database template option and automatically includes the template information and settings in any new databases you create. For example, you might create a template that contains header and footer paragraphs, uses a specific font, has a specific format, and contains field names you use often.

You can turn off the template option at any time in order to create new databases that do not contain the template information or settings. If you later want to include other information in your template, you can change it. You can also create a new template and save it in place of the existing template.

To create a database template for the first time or to replace an existing database template

1. Create a new database or open an existing one.
2. Type any headings or labels that you want included in the template.
3. Make any settings that you want included in the template. For example: margin settings, font and font size, and so on.
4. From the File menu, choose Save As.
5. In the Save File As Type box, choose DB Template.

   Works names the template document for you. The Database template is named TEMPLATE.DB.
6. Choose the OK button.

   If a template already exists, Works asks if you want to replace the existing file. Choose the OK button to replace the old database template with the one you have just created.

To turn off or turn on the template option

1. From the Options menu, choose Works Settings.
2. Under Use Templates For, choose the Database check box.

   An X is displayed in the check box when the Database option is turned on; choosing it again turns it off.
3. Choose the OK button.

To change a template

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type box, choose All Files (*.*).
3. In the File Name box, choose TEMPLATE.DB.

   Works named the database template TEMPLATE.DB.
4. Choose the OK button.
5. Make any changes you want to the template.
6. From the File menu, choose Close, and then choose the Yes button to save the changes to the template.

Sharing database information with other applications

You can open dBASE versions III and IV files in Works, and you can save Works databases in dBASE version III and IV formats. When you save a Works database as a dBASE file, it retains its field names.

You can also save a Works database as a text file (also known as an ASCII file), so that it can be used with other database applications. In text files, database field names are not retained.

For information on how to copy from one Windows version 3.0 or later application to another, see "Copying or moving entries to another Works tool" on page 285.

When you save a Works database as a text file, field entries are retained as values, not as formulas. For example, if you type the number **3** in a field that has currency format with two decimal places, then $3.00 is displayed in the field and retained in a text file. If the display of $3.00 is the result of a formula, such as =1+2, only the value $3.00 is retained in a text file, not the formula.

In Database text files, the contents of each record are separated by carriage returns and line feeds.

If you choose the Text & Commas option after choosing Save As from the File menu, the contents of each field are separated by commas; text is inside double quotation marks; and number formats, such as currency, are saved.

If you choose either Text & Tabs option, the contents of each field are separated by tabs, and number formats are saved.

To save a Works database as a dBASE file

Recognizable number formats
Most database programs, including dBASE, only recognize numbers in general, fixed, exponential, or true/false formats.

1. If it is not already open, open the Works database you want to save as a dBASE file.
2. From the File menu, choose Save As.
3. In the Save File As Type box, choose dBASE III or dBASE IV.
4. In the File Name box, type a filename and extension for the dBASE version of the file.
5. Choose the OK button.

   The database is saved on your disk in the dBASE format you chose. Your original database continues to be displayed and is not replaced or altered.

To open a dBASE file

1. From the File menu, choose Open Existing File.
2. In the List Files Of Type box, choose dBASE (*.dbf).
3. In the list of filenames, choose the file you want to open.
4. Choose the OK button.

Which Text & Tabs option should you choose?
Works gives you two options for saving text files in the Text & Tab format because not all applications use the same character sets to read files. If you have problems opening a Works text file in another application, try saving the database using the other option.

To save a Works database as a text file

1. Open the database you want to save as a text file.
2. From the File menu, choose Save As.
3. In the Save File As Type box, choose the Text & Commas, Text & Tabs, or Text & Tabs (DOS) option.
4. In the File Name box, type a filename and extension for the text version of the database.
5. Choose the OK button.

   The database is saved on your disk. Your original database continues to be displayed and is not replaced or altered.

To open a database file from another application

1. From the File menu, choose Open Existing File.
2. In the File Name box, type the filename and filename extension of the text file you want to open, or choose the file from the list of files.

   You can open a database from another application if the database is a text file. Works recognizes fields separated by either commas or tab marks, and records separated by carriage returns.
3. Choose the OK button.
4. In the Open As dialog box, choose Database.
5. Choose the OK button.

   When opening a text file, Works assumes that the first line of the database contains the first record rather than field names. If you have field names, they will appear as records.

Dialing a telephone number

No modem, no dialing
If you do not have a modem, you cannot use automatic dialing.

Does Works know you have a modem?
Before you can use your modem, you need to set which port it will be using. You do this by choosing the Works Settings command from the Options menu, and then choosing COM1 or COM2 as your communications port.

If you have a Hayes-compatible modem, you can use Works to automatically dial a telephone number to talk with someone.

For example, Works will dial any telephone number you have in a database. All you have to do is highlight the number in your database and tell Works to dial the number. You can then pick up your telephone receiver when the other party answers.

You can also include "in-house" extensions, and quickly contact co-workers or team project members.

The telephone number you highlight must contain any special codes you would normally dial by hand. For example, to dial long distance you must include a "1" before the area code.

For an in-house call, you enter the number into your database in the same way you would dial it yourself. For example, if you delete the first two digits of 7-digit telephone numbers for your company when you are calling in-house, you would enter 5-5555 in your database.

To automatically dial a telephone number

1 Open the database that contains the telephone number you want to dial.

2 Highlight the telephone number.

3 From the Options menu, choose Dial This Number.

Works dials the number and then displays a message.

4 Pick up your telephone, and then choose the OK button.
–or–
If the call did not go through, or if you want to cancel automatic dialing, choose the Cancel button.

Works returns to your database.

5 When you're finished with the call, hang up the telephone.

Naming, saving, duplicating, and reopening a database

After you create a database you should immediately save it to disk. Until you save your work on disk, it is temporary (stored only in the computer's memory) and can be lost because of a power interruption or equipment failure.

Besides saving a database, you can:

- Make an identical, backup copy as extra protection against losing your work. When you turn on the Make Backup Copy check box, Works updates the backup copy every time you save the original database.
- Duplicate it to create an new database. This is useful when you want two databases that are similar, but not exactly the same (for example, to track inventory for two stores).
- Reopen the database to change, view, or print it.

You can also open databases created by others, and you can open any of the sample databases that came with Works, in order to view them or to adapt them to your own use.

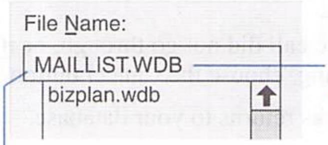
For information on opening and using the sample documents that come with Works, see "Jump Right In" in *Getting Started*.

To name and save a database and make a backup copy

1 From the File menu, choose Save As.

2 In the File Name box, type a name for the database that has no more than eight characters.

Saving databases in other formats
If you want to save a Works database to use with another application, such as Microsoft Word for Windows, see the section "Sharing database information with other applications" on page 305.



File Name:
MAILLIST.WDB
bizplan.wdb

The filename extension indicates the document type, such as .WDB for Database.

A filename can contain eight or fewer characters.

You do not need to type the filename extension .WDB. Works automatically adds it to the filename you type.

3 To make a backup copy of the database, turn on the Make Backup Copy check box.

4 Choose the OK button.

To duplicate a database

1. If you have not already done so, save the database you want to duplicate.
2. From the File menu, choose Save As.
3. In the File Name box, type a new name for the duplicate database.

   For example: If the original database is named ADDRESS.WDB, you might type **address2** as the name of the duplicate database.
4. Choose the OK button.

   Works gives the database a new name and saves it. The original database still exists, and you can open it again if you want.

To open an existing database

1. From the File menu, choose Open Existing File.
2. From the list of files in the File Name box, choose the database you want to open.
3. Choose the OK button.

If the database you want to open is not listed in the Open dialog box, it either doesn't exist in the current directory or it is not a typical Works database.

For information on locating files that are in other directories, press ALT+H and choose the Help topic, "Opening an existing database." For more information about opening files created in other applications, see "Sharing database information with other applications," on page 305.

Setting which files to open when you start Works

Turn off the Welcome
The first time you open Works, a Welcome box is displayed. If you would like to skip this screen each time you start Works, choose the Skip Welcome Screen button. If you later need introductory information, choose Tutorial from the Help menu.

If you regularly work with the same databases, you can save your workspace so that Works will open those documents automatically every time you start Works.

When Works automatically opens the documents you specify, it also arranges and sizes your document windows exactly as you had them.

If you set Works to open specific documents, you might not want it to display the Startup dialog box each time it starts. If you want, you can set Works so that it will no longer display this box during startup.

To open specific documents every time you start Works

1. Open all the documents you want Works to open when it starts.

   You can open any Word Processor, Spreadsheet, or Database documents.

2. Arrange the document windows exactly the way you want them.
3. From the File menu, choose Save Workspace.

   Works stores the information it needs to open your documents in exactly the same arrangement the next time you start Works. It also turns on the Use Saved Workspace option in the Works Settings dialog box.

To reset Works so that it doesn't open specific documents during startup

1. From the Options menu, choose Works Settings.
2. In the Works Settings dialog box, choose the Use Saved Workspace check box to turn it off.

   A check box that doesn't have an X in it is turned off. To turn the option back on, choose the check box again.

3. Choose the OK button.

To turn off the Works Startup dialog box

1. Start Works in the normal manner.
2. From the Options menu, choose Works Settings.
3. In the Works Settings dialog box, choose the Show Startup Dialog check box to turn it off.
4. Choose the OK button.

Closing a database or quitting Works

Minimizing document windows
When you minimize a document window, an icon representing the tool the document was created with is displayed at the bottom of the Works workspace, along with the name of the document that was in the window when it was minimized. Each Works tool has its own icon.

When you're finished with a database, you have three options—close the database you are working on, make the database an icon on the workspace, or close the database and quit Works.

To minimize the active database

▶ Click the Minimize button.
–or–
Press ALT+HYPHEN to open the Control menu, and then choose Minimize.

To restore a minimized database

▶ Double-click the minimized document icon.
–or–
Press ALT+HYPHEN to open the Control menu, and then choose Restore.

To close the active database

▶ Press CTRL+F4.
–or–
From the File menu, choose Close.

A message is displayed asking if you want to save any unsaved changes. Choose the Yes button to save changes you've made to the database, choose No to close the database without saving the changes, or choose Cancel to return to the database.

To quit Works and save all open documents

▶ Press ALT+F4.
–or–
From the File menu, choose Exit Works.

A message is displayed asking if you want to save any unsaved changes. Choose the Yes button to save changes you've made to the database, choose the No button to close the database without saving the changes, or choose the Cancel button to return to the database.

Guide to Database Reporting

For an overview of reporting, press SHIFT+F1 and go to the "Reporting" lesson in the Database section of the tutorial.

Database reports organize and summarize database information for printing. They give you much more flexibility than you have when printing a document from form or list view. For example, when you create a report, you can:

- Specify which fields to print and where on the page to print them.
- Sort and group field entries.
- Count, add, average, and perform other calculations to show statistical information about groups.
- Add titles, subtitles, and any explanatory notes that will make the report more understandable.

When creating and printing reports, you can also use the Database Find, Query, and Hide Record commands to select the precise records you want to view and print.

The following are the basic steps in creating a report:

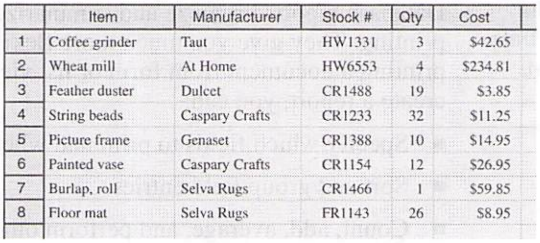
To	See	On page
Create a new report	Creating a standard Works report	314
Modify a report by adding rows and columns and changing the report's contents	Modifying a report	323
Preview the report before printing	Previewing a report	358
Print the report	Printing a report	363

Beginning a Database report

After you create a database, you can create reports to display the database's information in different ways.

For a tutorial, press SHIFT+F1 and go to the "Reporting" lesson in the Database section of the tutorial.

Each database can have up to eight reports. If you change the database information upon which a report is based, Microsoft Works for Windows automatically updates the report to match.



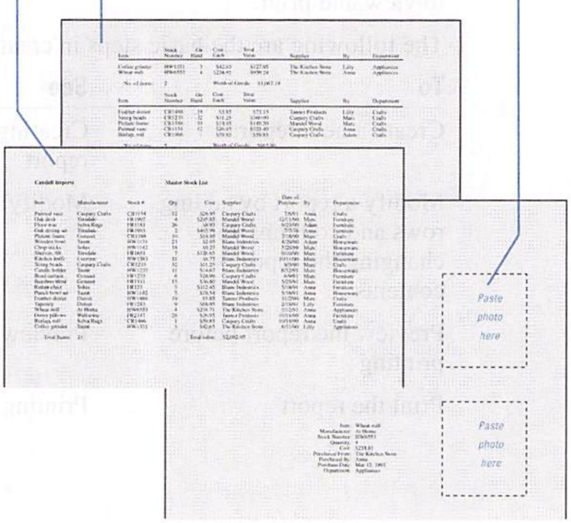
	Item	Manufacturer	Stock #	Qty	Cost
1	Coffee grinder	Taut	HW1331	3	$42.65
2	Wheat mill	At Home	HW6553	4	$234.81
3	Feather duster	Dulcet	CR1488	19	$3.85
4	String beads	Caspary Crafts	CR1233	32	$11.25
5	Picture frame	Genaset	CR1388	10	$14.95
6	Painted vase	Caspary Crafts	CR1154	12	$26.95
7	Burlap, roll	Selva Rugs	CR1466	1	$59.85
8	Floor mat	Selva Rugs	FR1143	26	$8.95

From the same database, you could create:

A master-list report that shows all the information about each item in a single row.

A report that groups items by location.

A report that provides a place to paste photos of each item.

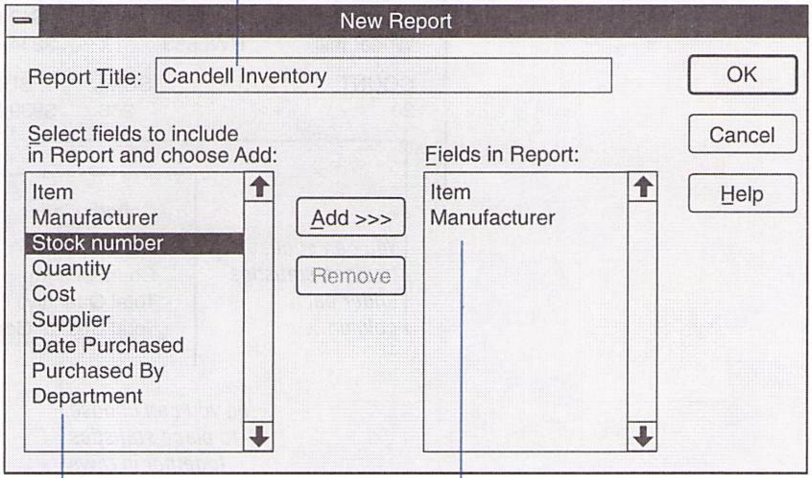


Creating a standard Works report

When you create a report, Works guides you through the process described in the following pages.

First, Works displays a New Report dialog box in which you can type a report title and choose the fields you want Works to include in the report.

Works positions the title you type at the top of the first page.



Report Title: Candell Inventory

Select fields to include in Report and choose Add:
- Item
- Manufacturer
- Stock number
- Quantity
- Cost
- Supplier
- Date Purchased
- Purchased By
- Department

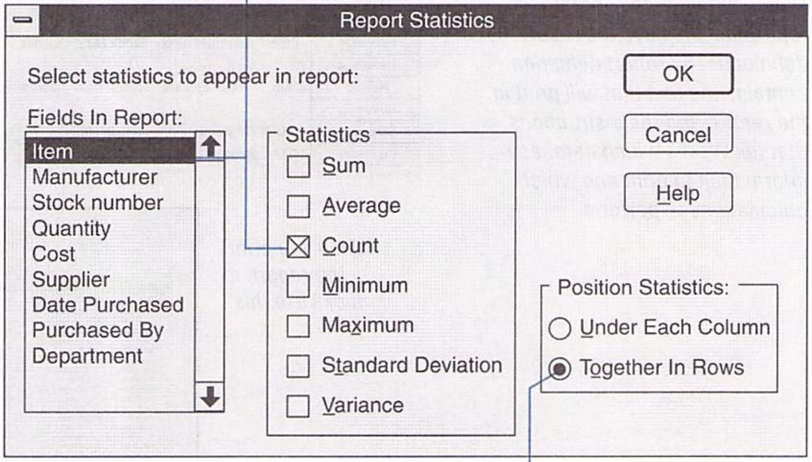
Fields in Report:
- Item
- Manufacturer

A list of the database fields

The names of the fields you chose

Next, Works displays the Report Statistics dialog box.

In this example, Works will count the number of entries in the Item field.



Select statistics to appear in report:

Fields In Report:
- Item
- Manufacturer
- Stock number
- Quantity
- Cost
- Supplier
- Date Purchased
- Purchased By
- Department

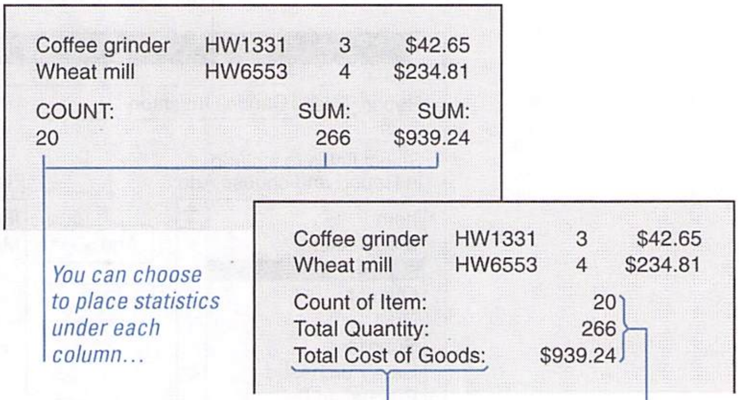
Statistics
- ☐ Sum
- ☐ Average
- ☒ Count
- ☐ Minimum
- ☐ Maximum
- ☐ Standard Deviation
- ☐ Variance

Position Statistics:
- ○ Under Each Column
- ● Together In Rows

The Report Statistics dialog box
As shown in the illustration, the Report Statistics dialog box lets you choose which statistical calculations, if any, you want performed.

You can choose where you want Works to print statistical information.

The following illustration shows how Works positions statistics.



Coffee grinder HW1331 3 $42.65
Wheat mill HW6553 4 $234.81

COUNT: SUM: SUM:
20 266 $939.24

Coffee grinder HW1331 3 $42.65
Wheat mill HW6553 4 $234.81

Count of Item: 20
Total Quantity: 266
Total Cost of Goods: $939.24

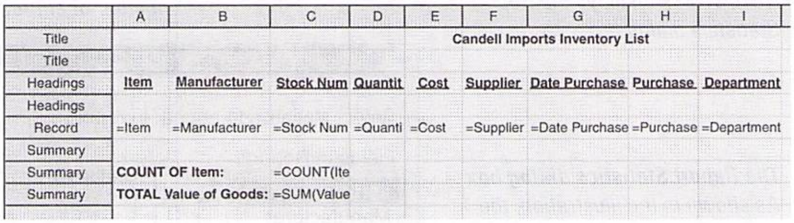
You can choose to place statistics under each column…

…or, you can choose to place statistics together in rows at the end of the report.

If you choose to place statistics together in rows, Works automatically inserts descriptions of the calculations.

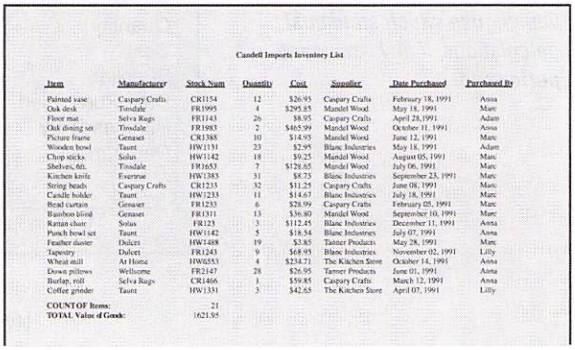
The report definition
Works automatically creates a report and displays the report definition. The report definition contains the text that will print in the report, and the instructions that tell Works which database information to print and which calculations to perform.

The report definition



	A	B	C	D	E	F	G	H	I
Title						**Candell Imports Inventory List**			
Title									
Headings	**Item**	**Manufacturer**	**Stock Num**	**Quantit**	**Cost**	**Supplier**	**Date Purchase**	**Purchase**	**Department**
Headings									
Record	=Item	=Manufacturer	=Stock Num	=Quanti	=Cost	=Supplier	=Date Purchase	=Purchase	=Department
Summary									
Summary	**COUNT OF Item:**		=COUNT(Ite						
Summary	**TOTAL Value of Goods:**		=SUM(Value						

When you print the report, it looks like this.



Candell Imports Inventory List

Item	Manufacturer	Stock Num	Quantity	Cost	Supplier	Date Purchased	Purchased By
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts	February 18, 1991	Anna
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood	May 18, 1991	Marc
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts	April 28,1991	Adam
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood	October 11, 1991	Anna
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood	June 12, 1991	Marc
Wooden bowl	Taunt	HW1131	23	$2.95	Blanc Industries	May 18, 1991	Adam
Chop sticks	Solus	HW1142	18	$9.25	Mandel Wood	August 05, 1991	Marc
Shelves, 6ft.	Tinsdale	FR1653	7	$128.65	Mandel Wood	July 06, 1991	Marc
Kitchen knife	Evertrue	HW1383	31	$8.75	Blanc Industries	September 23, 1991	Marc
String beads	Caspary Crafts	CR1233	32	$11.25	Caspary Crafts	June 08, 1991	Marc
Candle holder	Taunt	HW1233	11	$14.67	Blanc Industries	July 18, 1991	Marc
Bead curtain	Genaset	FR1233	6	$28.99	Caspary Crafts	February 05, 1991	Marc
Bamboo blind	Genaset	FR1311	13	$36.80	Mandel Wood	September 10, 1991	Marc
Rattan chair	Solus	FR123	3	$112.45	Blanc Industries	December 11, 1991	Anna
Punch bowl set	Taunt	HW1142	5	$18.54	Blanc Industries	July 07, 1991	Anna
Feather duster	Dulcet	HW1488	19	$3.85	Tanner Products	May 28, 1991	Marc
Tapestry	Dulcet	FR1243	9	$68.95	Blanc Industries	November 02, 1991	Lilly
Wheat mill	At Home	HW6553	4	$234.71	The Kitchen Store	October 14, 1991	Anna
Down pillows	Wellsome	FR2147	28	$26.95	Tanner Products	June 01, 1991	Anna
Burlap, roll	Selva Rugs	CR1466	1	$59.85	Caspary Crafts	March 12, 1991	Anna
Coffee grinder	Taunt	HW1331	3	$42.65	The Kitchen Store	April 07, 1991	Lilly
COUNT OF Items:		21					
TOTAL Value of Goods:		1621.95					

Once the report is created, you can preview it, modify it, and print it.

To create a standard report

1 Open or switch to the database for which you want to create a report.

2 From the View menu, choose Create New Report.

3 In the New Report dialog box, type a title.

4 Choose the first field you want to include in the report.

5 Choose the Add button.

6 Repeat steps 4 and 5 to add other fields to the report.

7 Choose the OK button.

The Report Statistics dialog box is displayed.

8 If you want Works to perform calculations on any of the fields you chose for the report, choose each field you want to calculate from the Fields In Report box, and then, under Statistics, choose the calculation you want Works to perform.

Example: To count the number of items in the report, choose the Item field and then choose the Count statistic. For more information about statistic options, see the table on page 332.

9 Under Position Statistics, choose the option you want.

See the illustration on page 316 for examples of how Works can position statistics.

10 Choose the OK button to close the Report Statistics dialog box.

A message tells you that you have finished defining the report.

11 Choose the OK button again.

Works automatically creates a report definition based on the selections you made and displays the report definition.

You can change the report definition to print information in many other ways. See "Modifying a report" on page 323.

Removing fields
If you add a field by mistake, choose it in the Fields In Report box, and then choose the Remove button.

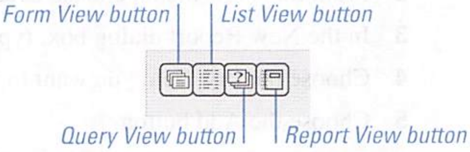
How Works prints field entries
The order in which you choose the fields to include in a report determines the order Works arranges them in the report—the contents of the first field you choose prints in the left-most column, the contents of the second field in the next column to the right, and so on.

If there is more than one report open
If you have several reports open and you click the Report View button on the Toolbar while in another Database view, Works switches to the last report listed on the View menu.

To switch to another Database view from the report definition

For information about using Toolbar buttons, see the section "Speeding up your work with the Toolbar" on page 324.

▶ On the Toolbar, click the List View or Form View button.


Form View button
List View button
Query View button
Report View button

–or–

From the View menu, choose the view you want.

To return to a report definition from another view

▶ On the Toolbar, click the Report View button.

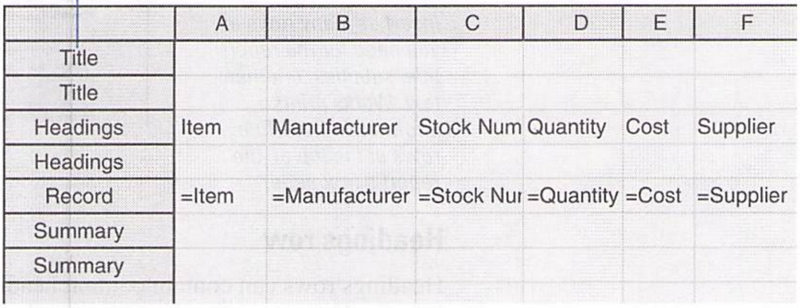
–or–

From the View menu, choose the report name.

Understanding the report definition

When you create a report, Works automatically creates a report definition. The report definition is organized in rows and columns, similar to the Database list view. However, instead of numbered records, report view has labeled rows. A row's label indicates its type; each row type has a specific purpose.

Works displays row labels along the left side of the window.



	A	B	C	D	E	F
Title						
Title						
Headings	Item	Manufacturer	Stock Num	Quantity	Cost	Supplier
Headings						
Record	=Item	=Manufacturer	=Stock Nu	=Quantity	=Cost	=Supplier
Summary						
Summary						

For more details...
You'll find more detailed explanations of row types in the pages following this table.

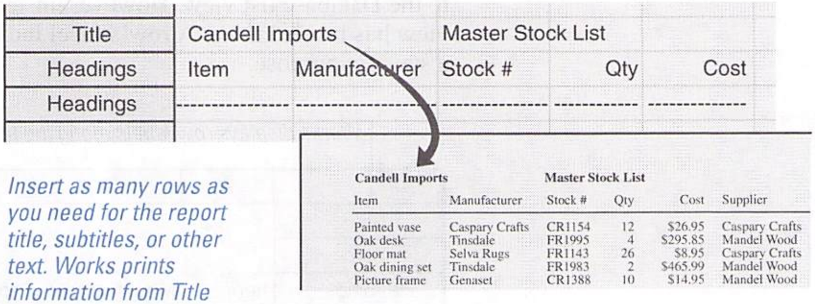
Row type	**Purpose**
Title	Report title or other text, printed only on first page
Headings	Page heading or other text, printed at the top of each page
Record	Designates which fields are to be printed
Intr *fieldname*	Designates a blank row or a heading before each group of records when the report is sorted
Summ *fieldname*	Designates a statistical summary to be printed after each group of records when the report is sorted
Summary	Designates a statistical summary to be printed at the end of the report

For more information about inserting and deleting rows, see "Adding and deleting rows and columns" on page 326.

Initially, Works inserts the necessary rows to create the report you specified. You can insert as many additional rows as you like, of any type. You can also delete any rows you do not want.

Title row

Title rows can contain any text: the report name, your company's name, your name, the date, and so on.



Title	Candell Imports		Master Stock List		
Headings	Item	Manufacturer	Stock #	Qty	Cost
Headings	----------	----------	----------	----------	----------

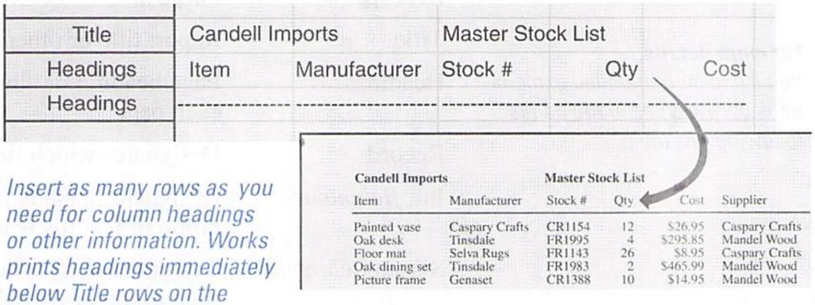
Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood

Insert as many rows as you need for the report title, subtitles, or other text. Works prints information from Title rows at the top of the report's first page.

Headings row

Headings rows can contain column headings or any other type of information you want repeated on each page.



Title	Candell Imports		Master Stock List		
Headings	Item	Manufacturer	Stock #	Qty	Cost
Headings	----------	----------	----------	----------	----------

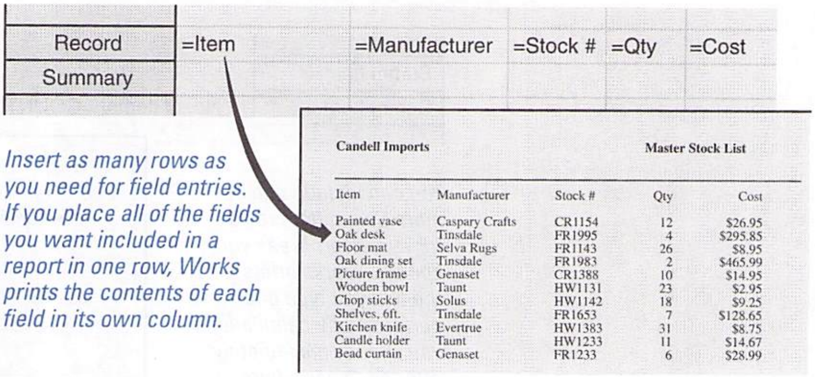
Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood

Insert as many rows as you need for column headings or other information. Works prints headings immediately below Title rows on the first page, and at the top of all other pages.

Record row

Record rows contain the instructions that tell Works which fields to print in a report. For example, the instruction =ITEM tells Works to print the contents of the Item field.



Record	=Item	=Manufacturer	=Stock #	=Qty	=Cost
Summary					

Insert as many rows as you need for field entries. If you place all of the fields you want included in a report in one row, Works prints the contents of each field in its own column.

Candell Imports **Master Stock List**

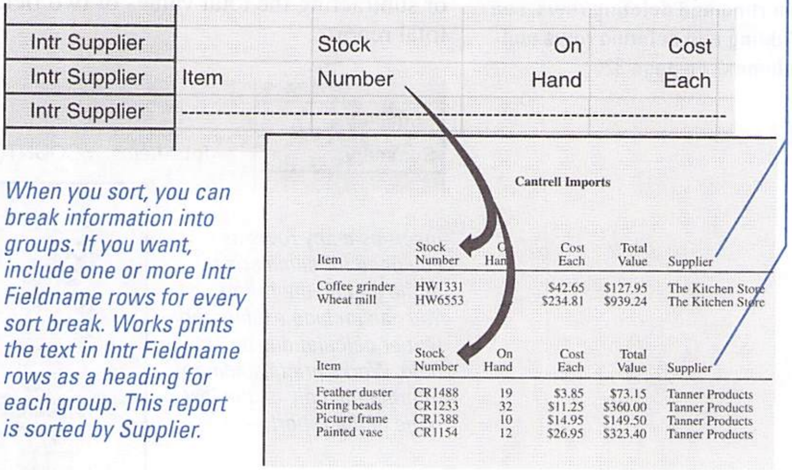
Item	Manufacturer	Stock #	Qty	Cost
Painted vase	Caspary Crafts	CR1154	12	$26.95
Oak desk	Tinsdale	FR1995	4	$295.85
Floor mat	Selva Rugs	FR1143	26	$8.95
Oak dining set	Tinsdale	FR1983	2	$465.99
Picture frame	Genaset	CR1388	10	$14.95
Wooden bowl	Taunt	HW1131	23	$2.95
Chop sticks	Solus	HW1142	18	$9.25
Shelves, 6ft.	Tinsdale	FR1653	7	$128.65
Kitchen knife	Evertrue	HW1383	31	$8.75
Candle holder	Taunt	HW1233	11	$14.67
Bead curtain	Genaset	FR1233	6	$28.99

Intr *fieldname* row

In this row label, Works replaces the word *fieldname* with an actual field name. For example, if you sorted a report using the Department field, the row label would become Intr Department.

Sort by logical groups
When you sort records, you can group them into logical groups by specifying a sort break. For example, in an address book list, you might group together all individuals with the same postal code. For information on sorting a report, see "Sorting and grouping field entries" on page 348.

Information sorted by supplier



Intr Supplier		Stock	On	Cost
Intr Supplier	Item	Number	Hand	Each
Intr Supplier	--			

When you sort, you can break information into groups. If you want, include one or more Intr Fieldname rows for every sort break. Works prints the text in Intr Fieldname rows as a heading for each group. This report is sorted by Supplier.

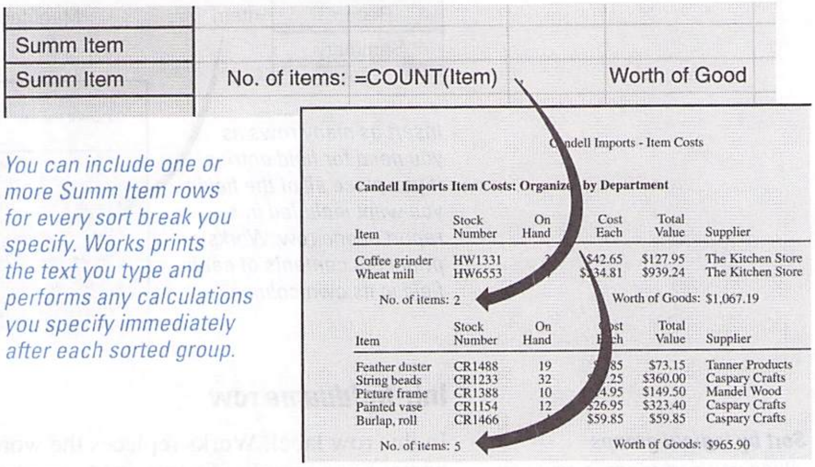
Cantrell Imports

Item	Stock Number	On Hand	Cost Each	Total Value	Supplier
Coffee grinder	HW1331		$42.65	$127.95	The Kitchen Store
Wheat mill	HW6553		$234.81	$939.24	The Kitchen Store

Item	Stock Number	On Hand	Cost Each	Total Value	Supplier
Feather duster	CR1488	19	$3.85	$73.15	Tanner Products
String beads	CR1233	32	$11.25	$360.00	Tanner Products
Picture frame	CR1388	10	$14.95	$149.50	Tanner Products
Painted vase	CR1154	12	$26.95	$323.40	Tanner Products

Summ *fieldname* row

In this row label, Works replaces *fieldname* with the actual field name. When you sort a report into groups, the Summ *fieldname* rows provide a place for you to include group statistics, such as the total number of items in a group, the total cost of all the items in a group, and so on.



Summ Item				
Summ Item	No. of items:	=COUNT(Item)		Worth of Good

Candell Imports - Item Costs

Candell Imports Item Costs: Organize by Department

Item	Stock Number	On Hand	Cost Each	Total Value	Supplier
Coffee grinder	HW1331	[illegible]	$42.65	$127.95	The Kitchen Store
Wheat mill	HW6553	[illegible]	$[illegible]34.81	$939.24	The Kitchen Store
No. of items: 2				Worth of Goods: $1,067.19	

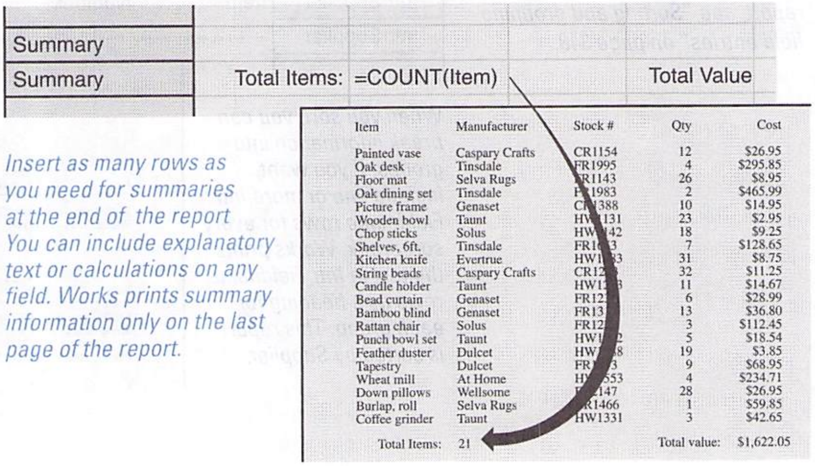
Item	Stock Number	On Hand	Cost Each	Total Value	Supplier
Feather duster	CR1488	19	[illegible]85	$73.15	Tanner Products
String beads	CR1233	32	[illegible].25	$360.00	Caspary Crafts
Picture frame	CR1388	10	[illegible]4.95	$149.50	Mandel Wood
Painted vase	CR1154	12	$26.95	$323.40	Caspary Crafts
Burlap, roll	CR1466	[illegible]	$59.85	$59.85	Caspary Crafts
No. of items: 5				Worth of Goods: $965.90	

You can include one or more Summ Item rows for every sort break you specify. Works prints the text you type and performs any calculations you specify immediately after each sorted group.

Summary row

For more information about inserting and deleting rows, see "Adding and deleting rows and columns" on page 326.

Use these rows to perform calculations for an entire report, such as adding or subtracting the total values of two fields or counting all the items in the total report.



Summary				
Summary	Total Items:	=COUNT(Item)		Total Value

Item	Manufacturer	Stock #	Qty	Cost
Painted vase	Caspary Crafts	CR1154	12	$26.95
Oak desk	Tinsdale	FR1995	4	$295.85
Floor mat	Selva Rugs	[illegible]R1143	26	$8.95
Oak dining set	Tinsdale	F[illegible]1983	2	$465.99
Picture frame	Genaset	C[illegible]388	10	$14.95
Wooden bowl	Taunt	HW[illegible]131	23	$2.95
Chop sticks	Solus	HW[illegible]42	18	$9.25
Shelves, 6ft.	Tinsdale	FR1[illegible]3	7	$128.65
Kitchen knife	Evertrue	HW1[illegible]3	31	$8.75
String beads	Caspary Crafts	CR12[illegible]	32	$11.25
Candle holder	Taunt	HW1[illegible]3	11	$14.67
Bead curtain	Genaset	FR12[illegible]	6	$28.99
Bamboo blind	Genaset	FR13[illegible]	13	$36.80
Rattan chair	Solus	FR12[illegible]	3	$112.45
Punch bowl set	Taunt	HW1[illegible]2	5	$18.54
Feather duster	Dulcet	HW[illegible]8	19	$3.85
Tapestry	Dulcet	FR[illegible]3	9	$68.95
Wheat mill	At Home	H[illegible]553	4	$234.71
Down pillows	Wellsome	[illegible]147	28	$26.95
Burlap, roll	Selva Rugs	[illegible]R1466	1	$59.85
Coffee grinder	Taunt	HW1331	3	$42.65
Total Items:	21		Total value:	$1,622.05

Insert as many rows as you need for summaries at the end of the report. You can include explanatory text or calculations on any field. Works prints summary information only on the last page of the report.

Modifying a report

Defining a report on your own
If you want to create a report definition without help from Works, choose the OK button immediately after choosing the Create New Report command (before you choose any fields). Works closes the New Report dialog box and displays a blank report definition. You can then design the entire report yourself.

In many cases, the standard reports that Works creates are all you need. However, if you want a report that shows more or less information, you can modify it. For example, you could:

- Add subtitles and explanatory text.
- Average, total, count, and perform other calculations.
- Sort and group information.
- Specify which records to print.

You make modifications to a report by changing the information in the report definition rows, or by adding new rows or columns and typing or inserting new information.

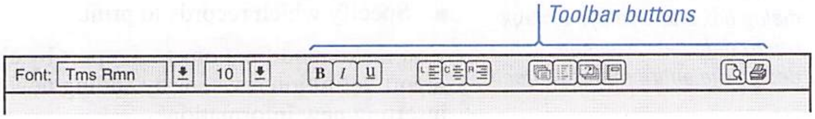
To	See
Insert space for additional information	"Adding and deleting rows and columns" on page 326
Add the contents of fields and include calculations	"Adding instructions for report contents and calculations" on page 330
Add titles, subtitles, labels, and explanatory text to a report	"Adding titles, headings, and labels to a report" on page 329
Edit, delete, copy, or move report information	"Changing, deleting, copying, and moving an entry" on page 343
Sort a report to change the order of information and how it is organized	"Sorting and grouping field entries" on page 348
Specify which records to print	"Choosing which records to print in a report" on page 350

Speeding up your work with the Toolbar

For more information on changing fonts and text alignment see "Changing text appearance and size" on page 340.

The Toolbar provides mouse users with shortcuts—you can quickly make entries bold, italic, and underlined. On the Toolbar, with one click, you can change fonts and font sizes and you can center an entry or align it left or right.

Other Toolbar buttons let you quickly change to another view, preview a report before printing it, or print a report.

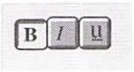

Toolbar buttons

Using the Toolbar

Many of Reporting's most commonly-used commands are on the Toolbar. The following table illustrates each Toolbar button and its purpose.

Click	To	Click	To
B	Make an entry bold	I	Make an entry italic
U	Underline entry	L☰	Align entry left
C☰	Center entry	R☰	Align entry right
⧉	Switch to form view	☰	Switch to list view
🔍	Switch to print preview	🖨	Print the report
▤	Switch to report view	Tms Rmn ⬇	Choose font
?	Switch to query view	10 ⬇	Choose font size

Anytime you move the highlight to an entry you have formatted, the Toolbar button changes to show the font style or format of that entry.


The button appears pressed down, to indicate that the highlighted entry is bold.

To use the Toolbar to change entries

1. Highlight each entry you want to change.
2. On the Toolbar, click the button for the font style or alignment you want.

To use the Toolbar to change font and font size

▶ On the Toolbar, click the Font box arrow or Font Size box arrow, and then click the font or font size you want from the list Works displays.

–or–

Press CTRL+F to see the font list, or press CTRL+Z to see the font size list.

To use the Toolbar to change views or to preview or print a report

▶ On the Toolbar, click the button for the action you want.

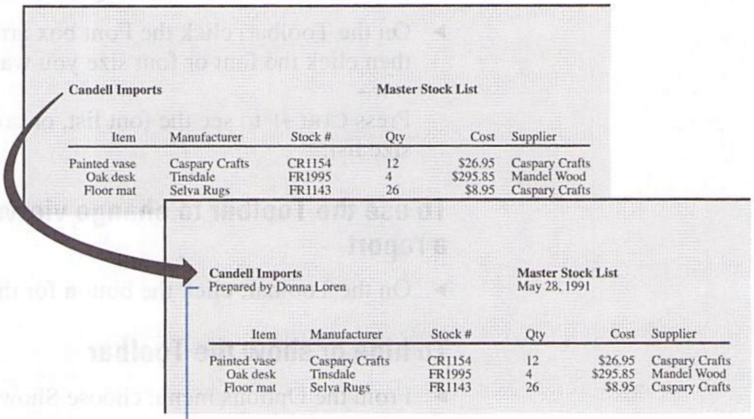
To hide or show the Toolbar

▶ From the Options menu, choose Show Toolbar.

When Show Toolbar is chosen, a mark is displayed beside the command name on the Options menu. To turn off Show Toolbar, choose the command again.

Adding and deleting rows and columns

You can add blank rows or columns to a report definition when you want additional space in your report or when you want to insert additional text or report instructions. For example, you might want to insert a row to add your name or today's date to a report.



Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts

Candell Imports
Prepared by Donna Loren

Master Stock List
May 28, 1991

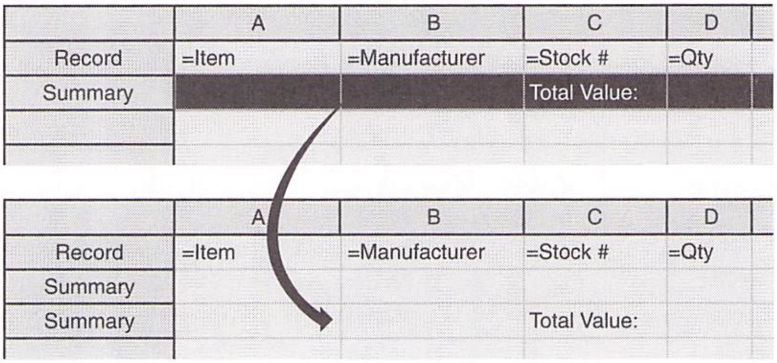
Item	Manufacturer	Stock #	Qty	Cost	Supplier
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts

You can insert rows to add information to your report.

Adding a blank row

For more information on row types, see "Understanding the report definition" on page 319.

When you insert a new row, Works asks you to choose the type of row you want to insert. Where Works inserts the new row is determined by the row type you specify. Works groups rows of the same type together, and it always keeps row types in the same order in the report definition.



	A	B	C	D
Record	=Item	=Manufacturer	=Stock #	=Qty
Summary			Total Value:	

	A	B	C	D
Record	=Item	=Manufacturer	=Stock #	=Qty
Summary				
Summary			Total Value:	

When you insert a new row at a location that already contains entries, Works moves the information down to make room for the new row.

To add a blank row

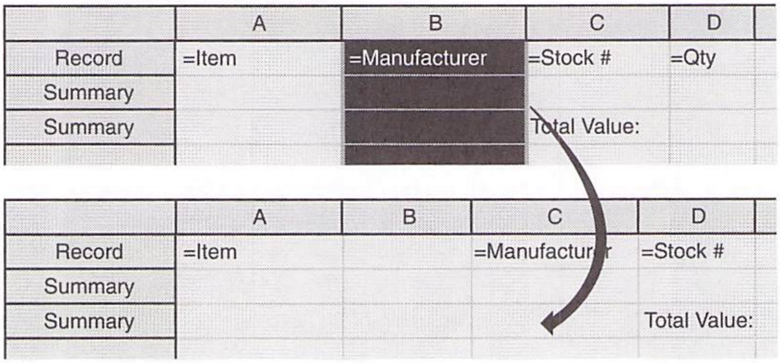
1. Highlight the entire row where you want to insert the new row.

   If you want to insert more than one row of the same type, highlight more than one row.
2. From the Edit menu, choose Insert Row/Column.
3. From the list of row types Works displays, choose the type you want to insert.
4. Choose the OK button.

Adding a blank column

For information about changing column width, see "Adjusting column width" on page 335.

Insert a new column if you want to insert new entries between two columns that already contain information or if you want to insert extra space between columns.



	A	B	C	D
Record	=Item	=Manufacturer	=Stock #	=Qty
Summary				
Summary			Total Value:	

	A	B	C	D
Record	=Item		=Manufacturer	=Stock #
Summary				
Summary				Total Value:

When you insert a new column at a location that already contains entries, Works moves the existing column to the right and inserts a blank column.

To add a blank column

1. Highlight the entire column where you want to insert a new column.

   If you want to insert more than one column, highlight more than one.
2. From the Edit menu, choose Insert Row/Column.

   Works inserts a blank column to the left of the highlighted column.

Deleting a row or a column

When you delete a row or column, any information contained in the row or column is removed from the report definition and cannot be recovered. However, deleting information in a report definition does not remove it from the database.

To delete a row or column

1 Highlight the row or column you want to delete.

If you want to delete more than one row or column, highlight more than one row or column.

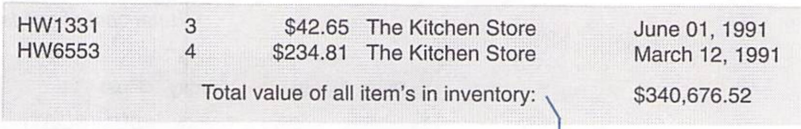
2 From the Edit menu, choose Delete Row/Column.

Works deletes each highlighted row or column and rearranges the remaining rows and columns.

Adding titles, headings, and labels to a report

You can add text to a report to label columns or rows or to provide additional information. For example, you can:

- Add headings and titles.
- Add labels to explain calculations, such as "Total items"—a label that describes a calculation that totals the number of items in a group.
- Add notes at the end of a report that explain how values were computed, who created the report, the names of other reports that contain related information, and so on.
- Add a date to identify when the report was printed or when certain information was compiled.



HW1331	3	$42.65	The Kitchen Store	June 01, 1991
HW6553	4	$234.81	The Kitchen Store	March 12, 1991
			Total value of all item's in inventory:	$340,676.52

This text was added to explain the calculation.

To add text, a number, or a date

1 Move the highlight to where you want to type an entry.

2 Type the entry you want to add.

Example: To label a calculation that subtracts withdrawals from deposits, you could type **Balance**

3 Click the Enter box in the formula bar.
–or–
Press ENTER.

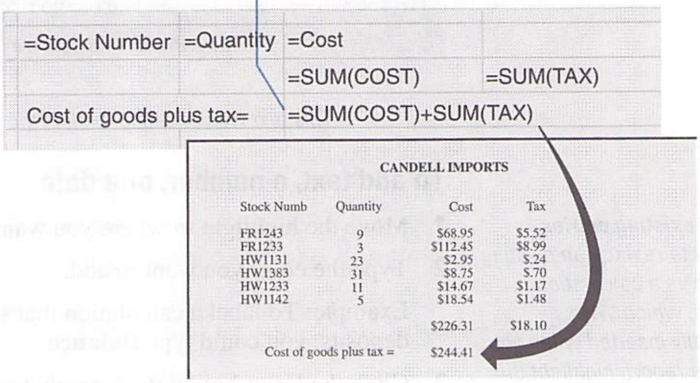
Replacing existing entries
If you want to replace an existing entry, such as a calculation description, which Works automatically inserted when you created the report, highlight the entry you want to replace. Then, when you type a new entry, it replaces the existing text.

Adding instructions for report contents and calculations

Report instructions control which information Works prints from the database and which calculations it performs. You can insert report instructions that:

- Insert field names.
- Insert field entries.
- Insert calculation formulas.
- Perform arithmetic operations.

This calculation adds the totals of the Cost field and the Tax field to find the total cost of goods.



=Stock Number	=Quantity	=Cost	
		=SUM(COST)	=SUM(TAX)
Cost of goods plus tax=		=SUM(COST)+SUM(TAX)	

CANDELL IMPORTS

Stock Numb	Quantity	Cost	Tax
FR1243	9	$68.95	$5.52
FR1233	3	$112.45	$8.99
HW1131	23	$2.95	$.24
HW1383	31	$8.75	$.70
HW1233	11	$14.67	$1.17
HW1142	5	$18.54	$1.48
		$226.31	$18.10
Cost of goods plus tax =		$244.41	

Adding a field name label

You can use field names as labels for columns or as part of a calculation formula. For example, if you decide to add a new column that will include the entries in a field named Supplier, you might insert the Supplier field name at the top of the column in a Headings row.

To add a field name label

1 Move the highlight to where you want the field name.

You usually put field name instructions in Intr rows.

2 From the Edit menu, choose Insert Field Name.

Works displays the field names of the active database.

3 Choose the field name you want to insert.

4 Choose the OK button.

Works inserts the field name at the highlight.

Typing instructions

If you know the field name or other instruction you want to insert, you can type it instead of inserting it using a Works command. To type an instruction to print entries for a database field named Address, type **=Address** *To type an instruction to total the values of the entries in a field named Income, type* **=sum(Income)**

Adding a field entry instruction

A field entry instruction tells Works to include the entries from the specified field in the report. For example, if you insert a field entry instruction for the Department field, Works prints all the entries in the Department field.

To add a field entry instruction

1 Move the highlight to where you want the instruction.

You usually put field entry instructions in Record rows.

2 From the Edit menu, choose Insert Field Entry.

Works displays a list of the fields for the active database.

3 Choose the name of the field you want to include.

4 Choose the OK button.

Works inserts an equal sign followed by the appropriate field name.

Example: Works inserts =Item.

When Works prints the report, it prints all the entries in that field.

Aligning field entries

If you change the alignment of a field entry instruction, Works prints all the entries in that field with the alignment you choose. The new alignment does not display in the report definition but is indicated by the appropriate Toolbar button when the highlight is in that cell.

Adding a calculation formula

Database reporting has several built-in functions that you can use to perform tasks:

Function	Description	Example
SUM	Totals all entries in a numeric field.	Total your company's sales for May.
AVG	Averages all values in a numeric field.	Average student's scores.
COUNT	Counts the number of entries in a field.	Count the number of items in a store inventory.
MAX	Finds the largest value in a numeric field.	Find the highest score in a series of tests.
MIN	Finds the smallest value in a numeric field.	Find the lowest temperature for the year from a list of daily temperatures.
STD	Calculates the standard deviation for a numeric field.	Calculate the standard deviation for the useful life of a product.
VAR	Calculates the variance for a numeric field.	Calculate the variance for a set of population data.

Adding Summ* fieldname *rows
To add a Sum fieldname *row, you must sort your report and include at least one sort break. For more information about sorting, see "Sorting and grouping field entries" on page 348. For more information about Summ fieldname rows, see "Summ fieldname row" on page 322.*

To perform calculations in a report, you insert a calculation formula in either a Summ *fieldname* row or a Summary row. If you insert a calculation formula in a Summ *fieldname* row, Works performs the calculation for a sorted group. If you insert a calculation formula in a Summary row, Works performs the calculation for the entire report.

To add a calculation formula

For information about adding rows to a report, see"Adding and deleting rows and columns" on page 326.

1 If necessary, add a Summ *fieldname* row or a Summary row for the calculation.

2 Move the highlight to where you want the instruction.

3 From the Edit menu, choose Insert Field Summary.

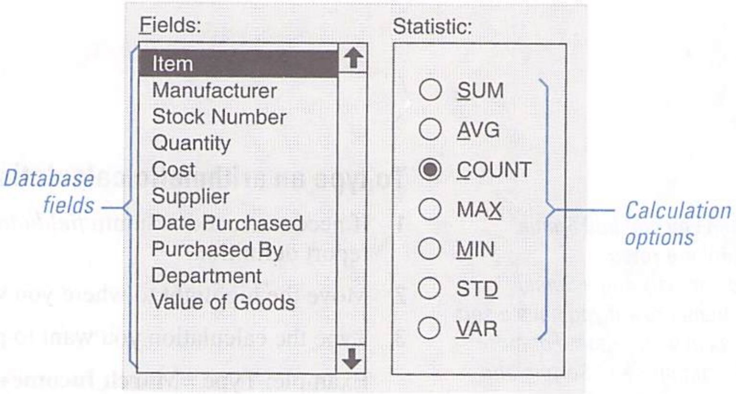
4 In the Fields box, choose a field name.

Example: Choose the Item field name.

When you can add Summ* fieldname *rows
You can only add a Summ fieldname *row if you have a sort break in your report. For more information, see "Sorting and grouping field entries" on page 348.*

5 Under Statistic, choose an option button.

Example: Choose COUNT to count the number of records in a column of entries.



Fields:

- Item
- Manufacturer
- Stock Number
- Quantity
- Cost
- Supplier
- Date Purchased
- Purchased By
- Department
- Value of Goods

Statistic:

- ○ SUM
- ○ AVG
- ● COUNT
- ○ MAX
- ○ MIN
- ○ STD
- ○ VAR

Database fields

Calculation options

6 Choose the OK button.

Works inserts the calculation formula at the insertion point.

Example: Works inserts =COUNT(Item).

Performing arithmetic calculations

You can create your own formulas using standard arithmetic operators alone or in conjunction with Reporting's built-in functions.

For example, you could:

- Find the average daily income for the last month by dividing the Total Sales field by the number of days in the month.

  Example: =Total Sales/31.

- Calculate the overall sales for your company by adding the Total revenue in each District field.

  Example: **=(District 1+District 2+District 3)**.

- Find your bank balance by subtracting the Withdrawal field from the Deposit field.

  Example: =(Deposits-Withdrawals).

Works arithmetic operators are:

Operator	Function
+	Addition
-	Subtraction
*	Multiplication
/	Division
^	Exponentiation

To type an arithmetic calculation

When you can add Summ* fieldname *rows
You can only add a Summ fieldname *row if you have a sort break in your report. For more information, see "Sorting and grouping field entires" on page 348.*

1 If necessary, add a Summ *fieldname* row or a Summary row to the report definition.

2 Move the highlight to where you want the calculation.

3 Type the calculation you want to perform.

Example: Type **=March Income+April Income** to add the total values of two fields named March Income and April Income.

4 Click the Enter box in the formula bar.
–or–
Press ENTER.

Adjusting column width

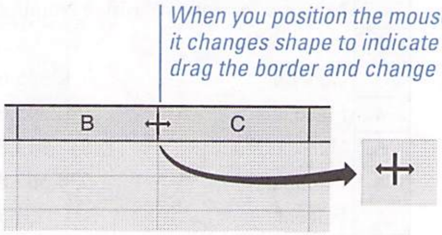
Initially, Works sets column widths to match the width of each field in list view. You can ensure that entries print properly, or make a report easier to read, by increasing or decreasing the width of any column.

Displaying clipped entries
Even though an entry is too wide for its column, and might not display or print properly, its contents are complete and will display in the formula bar when you highlight the entry and in the column when you widen it.

If a column is wider than any of its entries, Works prints extra space between adjacent columns. If a column is narrower than an entry, Works displays and prints the excess text to the right, if the adjacent column is empty. If there is an entry in the adjacent column, Works displays or prints only the text that fits in the first column.

To quickly change column width

▶ Drag the right border of the column you want to change.


When you position the mouse pointer over a border, it changes shape to indicate that you can now drag the border and change the width.

To set a precise width for one or more columns

1. Highlight each column you want to change.
2. From the Format menu, choose Column Width.
3. Type a width between 1 and 79.
4. Choose the OK button.

Changing number formats

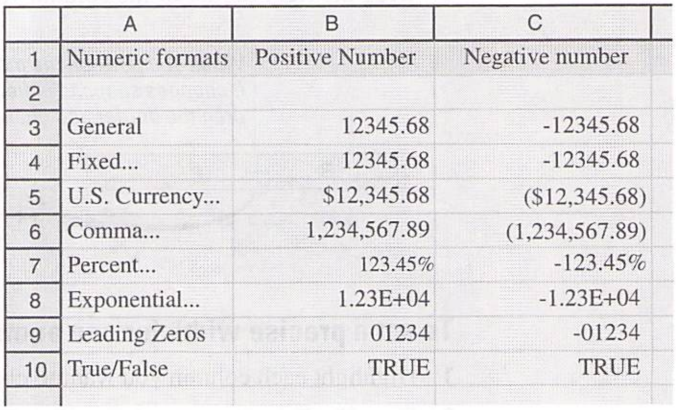
You can format numbers in a variety of ways, including percent, currency, and commas, in order to make your report information easier to read.

Number too large to fit in a cell?
If a number is too large to fit into a cell, Works displays ##### in the cell while the complete number you typed is displayed in the formula bar.

If Works does not display the numbers in the way you expect, they are probably formatted incorrectly. For example, if you expected an entry to display 54 but it displays 5400%, the entry is formatted for percent. If you want to display the value differently, reformat the entry.

The following examples show how each format displays numbers.

This example shows how each format option displays numbers.



	A	B	C
1	Numeric formats	Positive Number	Negative number
2			
3	General	12345.68	-12345.68
4	Fixed...	12345.68	-12345.68
5	U.S. Currency...	$12,345.68	($12,345.68)
6	Comma...	1,234,567.89	(1,234,567.89)
7	Percent...	123.45%	-123.45%
8	Exponential...	1.23E+04	-1.23E+04
9	Leading Zeros	01234	-01234
10	True/False	TRUE	TRUE

You can also format values as times or dates. For more information, see "Using dates and times in a database" on page 268.

When you change the format of a number, its underlying value does not change. Formatting affects only the appearance of information.

If you are formatting a number with the leading zeros format, type the total number of digits you want Works to display. For example, to format 936 as a number with two leading zeros, type **5** in the Number Of Digits box. Works will display 00936 in the cell.

To change a number's format

If percentages are too large
Be sure to use a decimal when typing an entry that is formatted for percentages. For example, type ***.54*** *to display 54%. If you type 54, Works displays 5400%.*

1. Highlight each entry you want to change.
2. From the Format menu, choose the format you want—General, Fixed, Currency, Comma, Percent, Exponential, Leading Zeros, or True/False.
3. If a dialog box is displayed, type the number of decimals or digits you want, or accept the preset value of 2.
4. Choose the OK button.

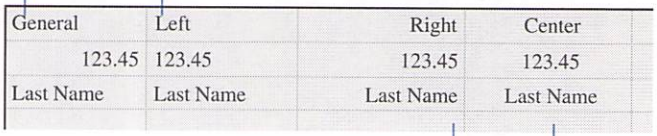
Changing field alignment

Changing alignment helps to make a report more attractive and easier to read. Alignment positions text and values horizontally between the borders of a column. the Works alignment commands are: General, Left, Right, and Center.

At first, when you create a database, all entries are formatted with the general alignment, but you can change the alignment of text and values in a report to be left-aligned, right-aligned, or centered as shown in the following illustration.

General alignment: Text is aligned on the left edge of the column, and dates and numbers are aligned on the right border.

Left alignment: Text and values are aligned with the left column border.



General	Left	Right	Center
123.45	123.45	123.45	123.45
Last Name	Last Name	Last Name	Last Name

Right alignment: Text and values are aligned with the right column border.

Centered: Text and values are aligned equally between the left and right column borders.

To quickly change an entry's alignment

To change back to general alignment
Turning off any other alignment returns an entry to general alignment.

1 Highlight the entry you want to change.

2 On the Toolbar, click the alignment button you want, or press a shortcut key.

To	Click	Press these keys
Left align a cell	L	CTRL+L
Right align a cell	R	CTRL+R
Center a cell	C	CTRL+E

For a convenient list of all keyboard shortcuts, press ALT+H and choose Keyboard Shortcuts from the Help menu.

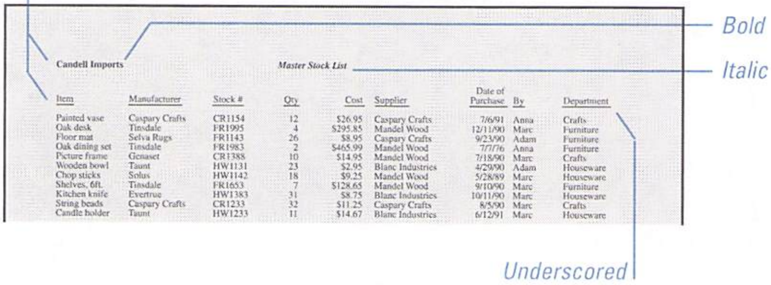
To change alignment and styles at the same time

1. From the Format menu, choose Style.
2. Under Alignment and Styles, choose the options you want.
3. Choose the OK button.

Changing text appearance and size

You can draw attention to words or entries by making them bold, italic, underlined, or any combination of font styles. For example, you can make report titles bold, underline headings, and italicize totals or other summary information.

Change font styles to make headings stand out.



Candell Imports *Master Stock List*

Item	Manufacturer	Stock #	Qty	Cost	Supplier	Date of Purchase	By	Department
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts	7/6/91	Anna	Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood	12/11/90	Marc	Furniture
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts	9/23/90	Adam	Furniture
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood	7/7/76	Anna	Furniture
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood	7/18/90	Marc	Crafts
Wooden bowl	Taunt	HW1131	23	$2.95	Blanc Industries	4/29/90	Adam	Houseware
Chop sticks	Solus	HW1142	18	$9.25	Mandel Wood	5/28/89	Marc	Houseware
Shelves, 6ft.	Tinsdale	FR1653	7	$128.65	Mandel Wood	9/10/90	Marc	Furniture
Kitchen knife	Evertrue	HW1383	31	$8.75	Blanc Industries	10/11/90	Marc	Houseware
String beads	Caspary Crafts	CR1233	32	$11.25	Caspary Crafts	8/5/90	Marc	Crafts
Candle holder	Taunt	HW1233	11	$14.67	Blanc Industries	6/12/91	Marc	Houseware

To quickly make an entry bold, italic, or underlined

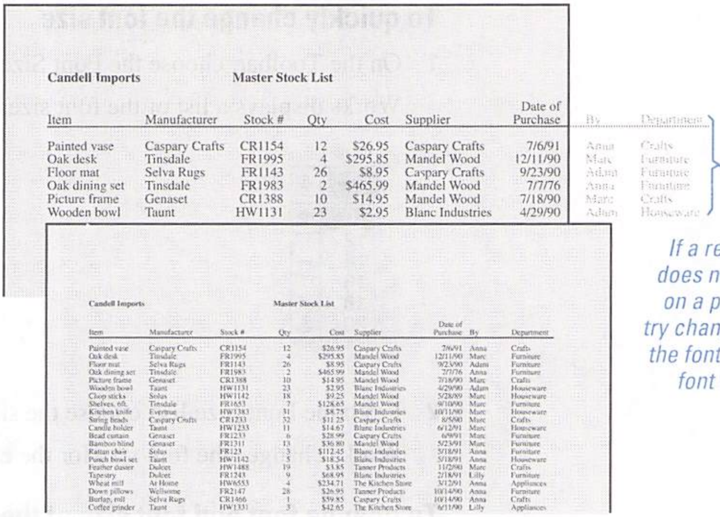
1. Highlight each entry you want to change.
2. On the Toolbar, click the font style you want, or press a shortcut key.

To	Click, or	Press these keys
Make an entry bold	**B**	CTRL + B
Make an entry italic	*I*	CTRL + I
Underline an entry	u	CTRL + U
Return to plain text		CTRL + SPACEBAR

Undoing a font style
If you make something bold and you want to change it back to plain style, highlight the entry and click the Bold button on the Toolbar, or press CTRL+B.

Changing font and font size

A font is a set of characters with a specific design, also called a type face. The font and font size you choose for your report affect its appearance and the amount of text that fits on a printed page. If the columns you want to print do not fit on the page, try a different font or font size.



Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier	Date of Purchase	By	Department
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts	7/6/91	Anna	Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood	12/11/90	Marc	Furniture
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts	9/23/90	Adam	Furniture
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood	7/7/76	Anna	Furniture
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood	7/18/90	Marc	Crafts
Wooden bowl	Taunt	HW1131	23	$2.95	Blanc Industries	4/29/90	Adam	Houseware

Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier	Date of Purchase	By	Department
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts	7/6/91	Anna	Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood	12/11/90	Marc	Furniture
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts	9/23/90	Adam	Furniture
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood	7/7/76	Anna	Furniture
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood	7/18/90	Marc	Crafts
Wooden bowl	Taunt	HW1131	23	$2.95	Blanc Industries	4/29/90	Adam	Houseware
Chop sticks	Solus	HW1142	18	$9.25	Mandel Wood	5/28/89	Marc	Houseware
Shelves, 6ft.	Tinsdale	FR1653	7	$128.65	Mandel Wood	9/10/90	Marc	Furniture
Kitchen knife	Evertrue	HW1383	31	$8.75	Blanc Industries	10/11/90	Marc	Houseware
String beads	Caspary Crafts	CR1233	32	$11.25	Caspary Crafts	8/5/90	Marc	Crafts
Candle holder	Taunt	HW1233	11	$14.67	Blanc Industries	6/12/91	Marc	Houseware
Bead curtain	Genaset	FR1233	6	$28.99	Caspary Crafts	6/9/91	Marc	Furniture
Bamboo blind	Genaset	FR1311	13	$36.80	Mandel Wood	5/23/91	Marc	Furniture
Rattan chair	Solus	FR123	3	$112.45	Blanc Industries	5/18/91	Anna	Furniture
Punch bowl set	Taunt	HW1142	5	$18.54	Blanc Industries	5/18/91	Anna	Houseware
Feather duster	Dulcet	HW1488	19	$3.85	Tanner Products	11/2/90	Marc	Crafts
Tapestry	Dulcet	FR1243	9	$68.95	Blanc Industries	2/18/91	Lilly	Furniture
Wheat mill	At Home	HW6553	4	$234.71	The Kitchen Store	3/12/91	Anna	Appliances
Down pillows	Wellsome	FR2147	28	$26.95	Tanner Products	10/14/90	Anna	Furniture
Burlap, roll	Selva Rugs	CR1466	1	$59.85	Caspary Crafts	10/14/90	Anna	Crafts
Coffee grinder	Taunt	HW1331	3	$42.65	The Kitchen Store	6/11/90	Lilly	Appliances

If a report does not fit on a page, try changing the font and font size.

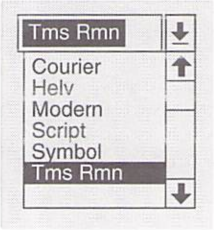
Different printers have different fonts and font names. Works automatically recognizes the fonts and font sizes your active printer can use, and it will display only those fonts and font sizes when you choose fonts and font sizes.

To quickly change the font

Changing fonts and font sizes
When you change the font or font size of any entry in a report, you change the font or font size of the entire report.

1 On the Toolbar, click the Font box arrow.

Works displays a list of the fonts your printer can use.



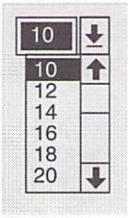
2 From the Font list, choose the font you want.

Works changes the font for the entire report.

To quickly change the font size

1. On the Toolbar, choose the Font Size box arrow.

   Works displays a list of the font sizes your printer can use.



2. From the Font Size list, choose the size you want.

   Works changes the font size for the entire report.

To change font and font size at the same time

1. From the Format menu, choose Font.
2. In the Fonts box, choose the font you want.
3. In the Size box, choose the font size you want.
4. Choose the OK button.

Changing, deleting, copying, and moving an entry

After creating a report, you can update it with different information, rearrange it, or correct mistakes. For example:

To	You can
Overwrite an entry	Type or insert new information over an existing entry to replace it.
Clear an entry	Remove an entry without removing font styles or alignment.
Delete an entry	Delete an entry, including its font styles and alignment.
Move an entry	Delete an entry and reinsert it at a new location.
Copy an entry	Duplicate an entry, such as a label or report instruction.
Edit an entry	Make minor changes to an entry, such as replacing or correcting a misspelled word.

To quickly change an existing entry

For more information on changing entries, see the section "Adding titles, headings, and labels to a report" on page 329 and "Adding instructions for report contents and calculations" on page 330.

1. Highlight the entry you want to change.
2. Type a new entry or choose the appropriate command to insert a new report instruction.
3. Click the Enter box in the formula bar.
   –or–
   Press ENTER.

To edit an entry

1. Highlight the entry you want to edit.
2. Click in the formula bar to move the insertion point into the formula bar.
   –or–
   Press F2.
3. See the following table for information on ways to move the insertion point, highlight characters, and delete characters.

To	Do this	Or press
Move the insertion point to the beginning of the text	Click to the left of the first character in a line	Home
Move the insertion point to the end of the text	Click to the right of the last character in a line	End
Move the insertion point left one character	Click one character to the left	←
Move the insertion point right one character	Click one character to the right	→
Move the insertion point anywhere in the formula bar	Click the formula bar where you want the insertion point	← or →
Highlight one or more characters	Drag the mouse pointer over the characters	⇧Shift + ← ⇧Shift + →
Delete highlighted characters		Del

To clear an entry

1 Highlight each entry you want to clear.

If you want to clear all the entries in more than one row or column, highlight each row or column you want to clear.

2 From the Edit menu, choose Clear.

To delete an entry

1 Highlight each entry you want to delete.

If you want to delete all the entries in more than one row or column, highlight each row or column you want to delete.

2 Press DEL.
–or–
From the Edit menu, choose Cut.

To move an entry

For information about inserting new rows and columns, see "Adding and deleting rows and columns" on page 326.

1. If necessary, insert a blank row or column to move the entry to.
2. Highlight each entry you want to move.

   If you want to move all the entries in more than one row or column, highlight each row or column you want to move.
3. Press SHIFT+DEL.
   –or–
   From the Edit menu, choose Cut.
4. Move the highlight to where you want to move the entry or entries.
5. Press SHIFT+INSERT.
   –or–
   From the Edit menu, choose Paste.

   Works moves the entries, filling the cells to the right and down from the highlight.

To move an entire row or column

1. Highlight the entire row or column you want to move.

   To move several rows or columns, highlight them.
2. Press SHIFT+DEL.
   –or–
   From the Edit menu, choose Cut.
3. Move the highlight to where you want to move the row or column.
4. Press SHIFT+INS.
   –or–
   From the Edit menu, choose Paste.

   Works moves any existing rows down or existing columns right to make room for the moved rows or columns.

To copy a label or report instruction

For information about copying report information to other Works tools, see "Copying a report's output to another tool or application" on page 352.

1. If necessary, insert a blank row or column to copy the label or report instructions to.
2. Highlight the label or report instruction you want to copy.
3. Press CTRL+INSERT.
   –or–
   From the Edit menu, choose Copy.
4. Move the highlight to where you want the copy.
5. Press SHIFT+INSERT.
   –or–
   From the Edit menu, choose Paste.

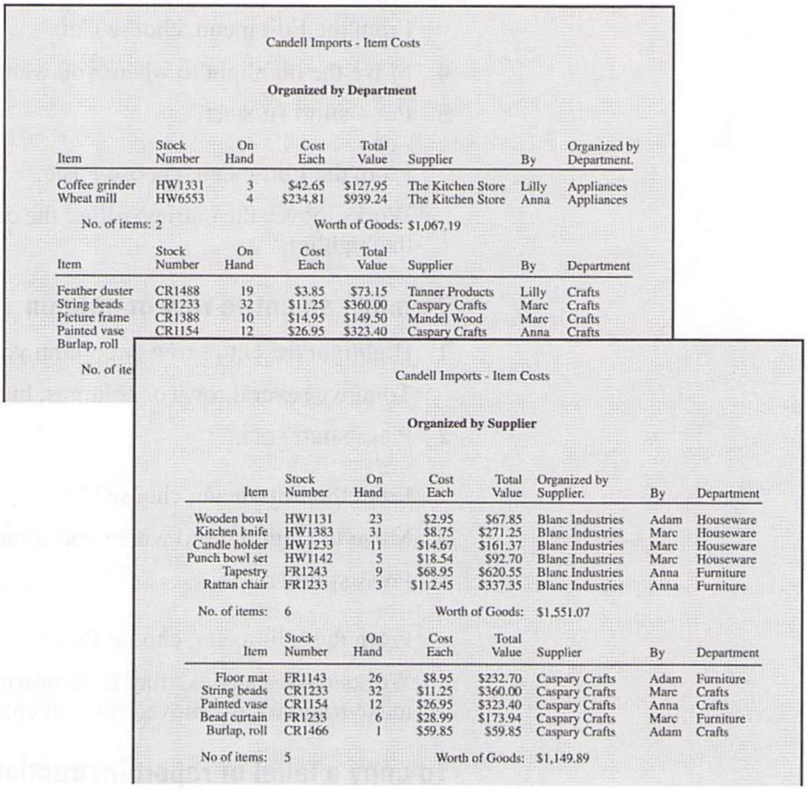
Deleting or duplicating a report

Don't start over

Instead of starting over with a new report, create variations of an existing report by duplicating the report, giving the duplicate a new name, and then making the modifications you want.

When you no longer need a report, you can delete it. For example, because each database can have no more than eight reports, you might need to delete an existing report before creating a new one.

The second report was created from the first to show the same information organized in a different way.



```
                        Candell Imports - Item Costs

                          Organized by Department

                  Stock      On      Cost     Total                          Organized by
Item              Number    Hand     Each     Value    Supplier          By    Department.
------------------------------------------------------------------------------------------
Coffee grinder    HW1331       3   $42.65   $127.95    The Kitchen Store Lilly Appliances
Wheat mill        HW6553       4  $234.81   $939.24    The Kitchen Store Anna  Appliances

      No. of items: 2                     Worth of Goods: $1,067.19

                  Stock      On      Cost     Total
Item              Number    Hand     Each     Value    Supplier          By    Department
------------------------------------------------------------------------------------------
Feather duster    CR1488      19    $3.85    $73.15    Tanner Products   Lilly Crafts
String beads      CR1233      32   $11.25   $360.00    Caspary Crafts    Marc  Crafts
Picture frame     CR1388      10   $14.95   $149.50    Mandel Wood       Marc  Crafts
Painted vase      CR1154      12   $26.95   $323.40    Caspary Crafts    Anna  Crafts
Burlap, roll

      No. of ite
```

```
                        Candell Imports - Item Costs

                           Organized by Supplier

               Stock      On      Cost      Total   Organized by
         Item  Number    Hand     Each      Value   Supplier.          By     Department
------------------------------------------------------------------------------------------
  Wooden bowl  HW1131      23    $2.95     $67.85   Blanc Industries   Adam   Houseware
 Kitchen knife HW1383      31    $8.75    $271.25   Blanc Industries   Marc   Houseware
 Candle holder HW1233      11   $14.67    $161.37   Blanc Industries   Marc   Houseware
Punch bowl set HW1142       5   $18.54     $92.70   Blanc Industries   Marc   Houseware
     Tapestry  FR1243       9   $68.95    $620.55   Blanc Industries   Anna   Furniture
  Rattan chair FR1233       3  $112.45    $337.35   Blanc Industries   Anna   Furniture

 No. of items: 6                   Worth of Goods:  $1,551.07

               Stock      On      Cost      Total
         Item  Number    Hand     Each      Value   Supplier           By     Department
------------------------------------------------------------------------------------------
    Floor mat  FR1143      26    $8.95    $232.70   Caspary Crafts     Adam   Furniture
 String beads  CR1233      32   $11.25    $360.00   Caspary Crafts     Marc   Crafts
 Painted vase  CR1154      12   $26.95    $323.40   Caspary Crafts     Anna   Crafts
 Bead curtain  FR1233       6   $28.99    $173.94   Caspary Crafts     Marc   Furniture
  Burlap, roll CR1466       1   $59.85     $59.85   Caspary Crafts     Adam   Crafts

  No of items: 5                   Worth of Goods:  $1,149.89
```

To delete a report

Changed your mind?

If you chose to delete a report and change your mind before choosing the OK button, choose the Cancel button to close the dialog box and not delete the report. After you once delete a report, it cannot be recovered.

1. From the View menu, choose Delete Report.

   Works lists all the reports associated with the active database.
2. From the list of reports, choose the one you want to delete.
3. Choose the Delete button.
4. To delete other reports, repeat steps 2 and 3.
5. Choose the OK button.

   Works deletes the report and removes its name from the View menu.

To duplicate a report

1. From the View menu, choose Duplicate Report.

   Works lists all the reports associated with the active database.
2. Choose the one you want to copy.
3. In the Name box, type a name of 15 characters or less for the duplicate.
4. Choose the Duplicate button.
5. To duplicate other reports, repeat steps 2 through 4.
6. Choose the OK button.

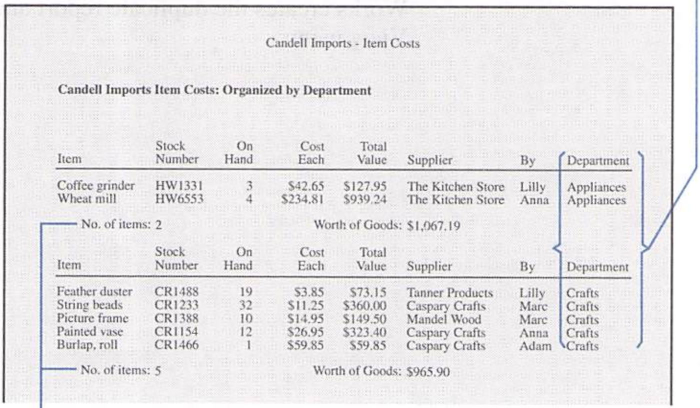
   Works creates the duplicate report and adds the name to the View menu.

Sorting and grouping field entries

Sorting arranges records in order—alphabetically, chronologically, or numerically. For example, you could sort an inventory database alphabetically by item name, chronologically by purchase date, or numerically by cost.

You can create separate groups called sort breaks so you can summarize the contents of each group separately—Works automatically inserts Summ *fieldname* rows after sorted groups.

By sorting on the Department field, you can organize the report by department.



Candell Imports - Item Costs

Candell Imports Item Costs: Organized by Department

Item	Stock Number	On Hand	Cost Each	Total Value	Supplier	By	Department
Coffee grinder	HW1331	3	$42.65	$127.95	The Kitchen Store	Lilly	Appliances
Wheat mill	HW6553	4	$234.81	$939.24	The Kitchen Store	Anna	Appliances

No. of items: 2 Worth of Goods: $1,067.19

Item	Stock Number	On Hand	Cost Each	Total Value	Supplier	By	Department
Feather duster	CR1488	19	$3.85	$73.15	Tanner Products	Lilly	Crafts
String beads	CR1233	32	$11.25	$360.00	Caspary Crafts	Marc	Crafts
Picture frame	CR1388	10	$14.95	$149.50	Mandel Wood	Marc	Crafts
Painted vase	CR1154	12	$26.95	$323.40	Caspary Crafts	Anna	Crafts
Burlap, roll	CR1466	1	$59.85	$59.85	Caspary Crafts	Adam	Crafts

No. of items: 5 Worth of Goods: $965.90

By including a sort break, you can create a summary row in which you can count the items and total their values.

Break by first letter

Choosing to break on the first letter is handy when you have long lists. If your report prints a long list of customers, you can break between the names that begin with a new letter.

When sorting, you can:

- Sort records on up to three fields at the same time.
- Create breaks for one or all the sort fields.

If you choose to sort on more than one field, Works first arranges the records based on the information in the first sorted field. If any entries in the first field are identical, Works arranges those records based on the entries in the second sorted field. Then, if any records have identical entries in both the first and second sorted fields, Works arranges those records based on the entries in the third sorted field.

To sort a report and set up sort breaks

1 From the Select menu, choose Sort Records.

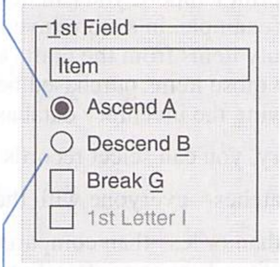
2 Under 1st Field box, type the name of the first field you want Works to use when sorting.

Other ways to choose records
You can further define the contents of a report using the Search command or the Query command in the Database. For more information, see "Choosing which records to print in a report" on page 350.

Sorting order
If a sort field contains different types of entries, Works places text first, then numbers—in ascending order—and in the opposite order in descending order. Works always places blank entries last regardless of the sort order.

3 Choose either the Ascend or Descend option button.

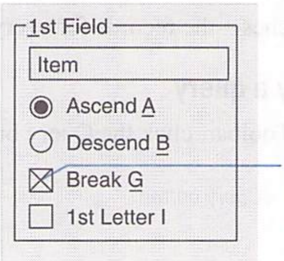
Choose Ascend to sort in ascending order (for example, A-Z, 0-9, or January to December).



1st Field
Item
● Ascend A
○ Descend B
☐ Break G
☐ 1st Letter I

Choose Descend to sort in the reverse order (for example, Z-A, 9-0, or December to January).

4 If you want to create a grouping, choose the Break check box.



1st Field
Item
● Ascend A
○ Descend B
☒ Break G
☐ 1st Letter I

When you choose Break, Works displays an X in the check box to show the option is turned on.

5 If you want Works to group entries according to the first letter in the field, choose the 1st Letter check box.

The 1st Letter option is available only when you choose the Break check box. If you do not choose 1st Letter, Works creates groupings whenever there is a change in any part of the sort field.

Example: Choose the1st Letter option to group all field entries that start with the letter "A," all that start with the letter "B," and so on.

To preview a sort
To see the sort order and breaks before printing, click the Print Preview button on the Toolbar. For more information on previewing reports, see "Previewing a report" on page 358.

6 If you want to specify a second or third sort field, repeat steps 2 through 5 under 2nd Field and 3rd Field.

7 Choose the OK button.

Works performs the sort. If you choose one or more sort breaks, Works inserts a Summ *fieldname* row for each break and inserts calculation formulas in each column.

For more information about inserting calculations, see "Adding a calculation formula" on page 331.

Choosing which records to print in a report

For a tutorial, press SHIFT+F1 and go to "Advanced searching" lesson in the Database section of the tutorial.

Before you print a report, you can define exactly which records to include. For example, in a store inventory report, you might want to include only items from the crafts department. Or you might want to include only those items purchased before a certain date. You can do this by querying the inventory database.

Using a query, you can select records by:

- Exact matches—everyone with the last name of Tanner.
- Greater-than or less-than comparisons—everyone whose last name comes before Tanner or after Tanner.
- Range matches—everyone whose last name begins with a letter between "M" and "S."
- Matches in multiple fields—the records for everyone whose last name is Tanner, lives in London, and is 30 years old.
- Mismatches—the records for everyone who does not live in London.

You can also create queries that almost, but not quite, match; use calculations; find dates; or use Works functions.

To specify a query

You can hide a record so that its entries do not print. For more information, see "Reversing and changing the effects of a query" on page 282.

1 On the Toolbar, click the Query button.

Query button

–or–
From the View menu, choose Query

For complete information about querying, see "Querying a database for related records" on page 274.

2 In one or more fields, type a query instruction.

Example: To select records with a last name of Tanner, type **tanner** in the Last Name field.

3 On the Toolbar, click the Report button.

Report button

–or–
From the View menu, choose the report name.

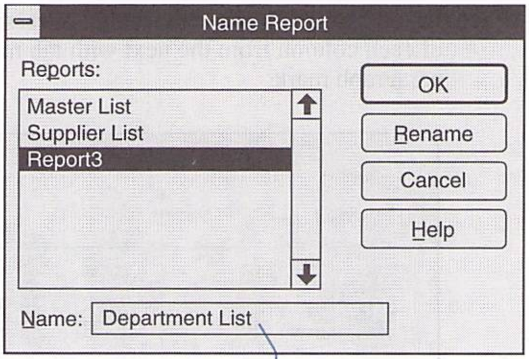
To view the results of a query

▶ Switch to list view.

Works displays the records that your query selected and hides all records that do not match the query instructions.

Naming a report for identification

When you create a report, Works gives it a name. It names the first report Report1, the second Report2, and so on. You can give each report a more descriptive name to remind you of its purpose or contents. For example, you might name an inventory master list Master List, or name a report that sorts items by vendor Supplier List, and so on.



Reports:
Master List
Supplier List
Report3

Name: Department List

A report name can be up to 15 characters long.

To rename a report

1 From the View menu, choose Name Report.

Works lists all existing reports associated with the active database.

2 From the list of reports, choose the one you want to rename.

3 In the Name box, type a new report name of 15 characters or less.

4 Choose the Rename button.

5 To rename another report, repeat steps 2 through 4.

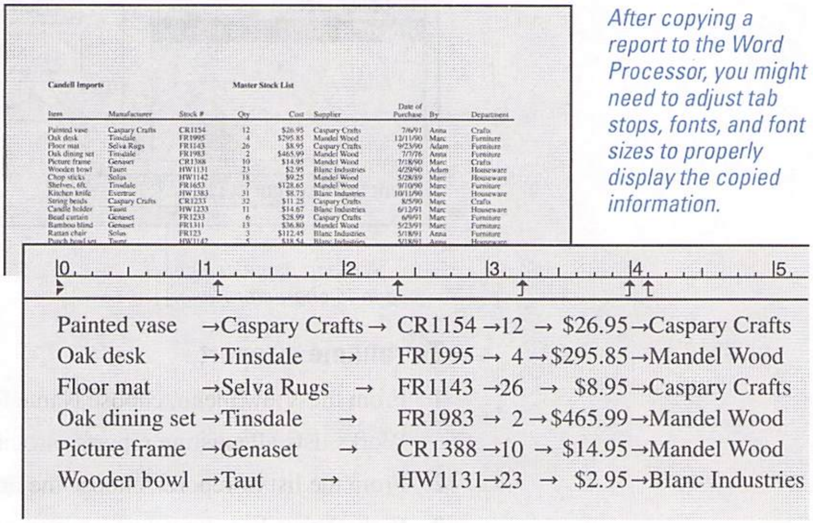
6 Choose the OK button.

Works replaces the old report name with the new report name on the View menu.

Copying a report's output to another tool or application

When you copy a report's output to another Works tool or to another Windows version 3.0 or later application, Works copies the same information that you would get if you printed the report—it performs all report instructions and then copies the report's output.

If you copy a report to the Word Processor, Works separates the contents of each column from the next with tab marks, and it ends each row with a paragraph mark.



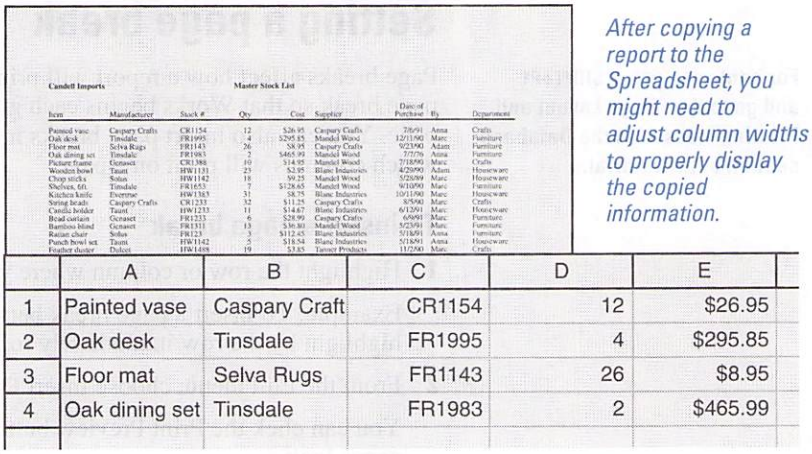
Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier	Date of Purchase	By	Department
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts	7/6/91	Anna	Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood	12/11/90	Marc	Furniture
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts	9/23/90	Adam	Furniture
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood	7/7/76	Anna	Furniture
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood	7/18/90	Marc	Crafts
Wooden bowl	Taunt	HW1131	23	$2.95	Blanc Industries	4/29/90	Adam	Houseware
Chop sticks	Solus	HW1142	18	$9.25	Mandel Wood	5/28/89	Marc	Houseware
Shelves, 6ft.	Tinsdale	FR1653	7	$128.65	Mandel Wood	9/10/90	Marc	Furniture
Kitchen knife	Evertrue	HW1383	31	$8.75	Blanc Industries	10/11/90	Marc	Houseware
String beads	Caspary Crafts	CR1233	32	$11.25	Caspary Crafts	8/5/90	Marc	Crafts
Candle holder	Taunt	HW1233	11	$14.67	Blanc Industries	6/12/91	Marc	Houseware
Bead curtain	Genaset	FR1233	6	$28.99	Caspary Crafts	6/9/91	Marc	Furniture
Bamboo blind	Genaset	FR1311	13	$36.80	Mandel Wood	5/23/91	Marc	Furniture
Rattan chair	Solus	FR123	3	$112.45	Blanc Industries	5/18/91	Anna	Furniture

```
Painted vase   →Caspary Crafts→  CR1154 →12  → $26.95→Caspary Crafts
Oak desk       →Tinsdale      →  FR1995 → 4 →$295.85→Mandel Wood
Floor mat      →Selva Rugs    →  FR1143 →26  →  $8.95→Caspary Crafts
Oak dining set →Tinsdale      →  FR1983 → 2 →$465.99→Mandel Wood
Picture frame  →Genaset       →  CR1388 →10  → $14.95→Mandel Wood
Wooden bowl    →Taut          →  HW1131→23   →  $2.95→Blanc Industries
```

After copying a report to the Word Processor, you might need to adjust tab stops, fonts, and font sizes to properly display the copied information.

If you copy a report to the Spreadsheet, Works places the contents of each entry in the same Report row into a separate cell in a spreadsheet row. It copies each Report row into a separate spreadsheet row.



Candell Imports **Master Stock List**

Item	Manufacturer	Stock #	Qty	Cost	Supplier	Date of Purchase	By	Department
Painted vase	Caspary Crafts	CR1154	12	$26.95	Caspary Crafts	7/6/91	Anna	Crafts
Oak desk	Tinsdale	FR1995	4	$295.85	Mandel Wood	12/11/90	Marc	Furniture
Floor mat	Selva Rugs	FR1143	26	$8.95	Caspary Crafts	9/23/90	Adam	Furniture
Oak dining set	Tinsdale	FR1983	2	$465.99	Mandel Wood	7/7/76	Anna	Furniture
Picture frame	Genaset	CR1388	10	$14.95	Mandel Wood	7/18/90	Marc	Crafts
Wooden bowl	Taunt	HW1131	23	$2.95	Blanc Industries	4/29/90	Adam	Houseware
Chop sticks	Solus	HW1142	18	$9.25	Mandel Wood	5/28/89	Marc	Houseware
Shelves, 6ft.	Tinsdale	FR1653	7	$128.65	Mandel Wood	9/10/90	Marc	Furniture
Kitchen knife	Evertrue	HW1383	31	$8.75	Blanc Industries	10/11/90	Marc	Houseware
String beads	Caspary Crafts	CR1233	32	$11.25	Caspary Crafts	8/5/90	Marc	Crafts
Candle holder	Taunt	HW1233	11	$14.67	Blanc Industries	6/12/91	Marc	Houseware
Bead curtain	Genaset	FR1233	6	$28.99	Caspary Crafts	6/8/91	Marc	Furniture
Bamboo blind	Genaset	FR1311	13	$36.80	Mandel Wood	5/23/91	Marc	Furniture
Rattan chair	Solus	FR123	3	$112.45	Blanc Industries	5/18/91	Anna	Furniture
Punch bowl set	Taunt	HW1142	5	$18.54	Blanc Industries	5/18/91	Anna	Houseware
Feather duster	Dulcet	HW1488	19	$3.85	Tanner Products	11/2/90	Marc	Crafts

	A	B	C	D	E
1	Painted vase	Caspary Craft	CR1154	12	$26.95
2	Oak desk	Tinsdale	FR1995	4	$295.85
3	Floor mat	Selva Rugs	FR1143	26	$8.95
4	Oak dining set	Tinsdale	FR1983	2	$465.99

After copying a report to the Spreadsheet, you might need to adjust column widths to properly display the copied information.

To copy a report into another Works tool or Windows application

1 Switch to or open the report you want to copy.

2 Highlight the part of the report definition you want to copy the output from.

To copy the entire report, highlight the entire report definition.

3 From the Edit menu, choose Copy Report Output.

4 Open or switch to the document or application into which you want to copy the report output.

5 From the tool or application Edit menu, choose Paste.

Works pastes the output of your selection into the new document.

Setting a page break

For a tutorial, press SHIFT+F1 and go to the "Page Layout and Printing" lesson in the Database section of the tutorial.

Page breaks affect how a report will print. For example, you can insert a page break so that Works begins each group in a sorted report on a new page. You can also insert page breaks in columns so you can specify which columns will print on a page.

To insert a page break

1 Highlight the row or column where you want a page break.

Example: To insert a page break between each group in a sorted report, highlight by the row immediately following the Summ *fieldname* row.

2 From the Edit menu, choose Insert Page Break.

You can click the Print Preview button on the Toolbar to see how the pages look.

To remove a page break

1 Highlight the row or column below or to the right of the page break.

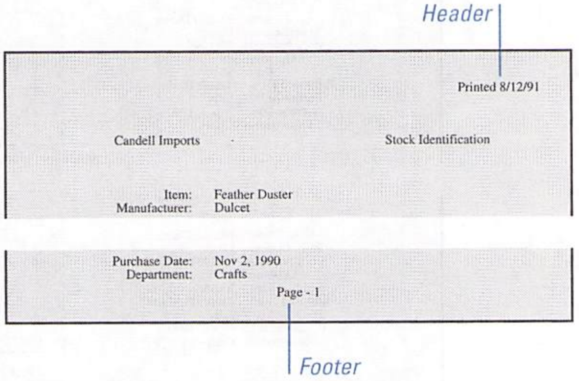
2 From the Edit menu, choose Delete Page Break.

Creating a header or footer and numbering pages

For a tutorial, press SHIFT+F1 and go to the "Page Layout and Printing" lesson in the Database section of the tutorial.

Where headers and footers print
By changing page margins and header or footer margins, you can control where a header or footer prints on a page. For example, increase the top page margin and the header margin to have the header print lower on the page.

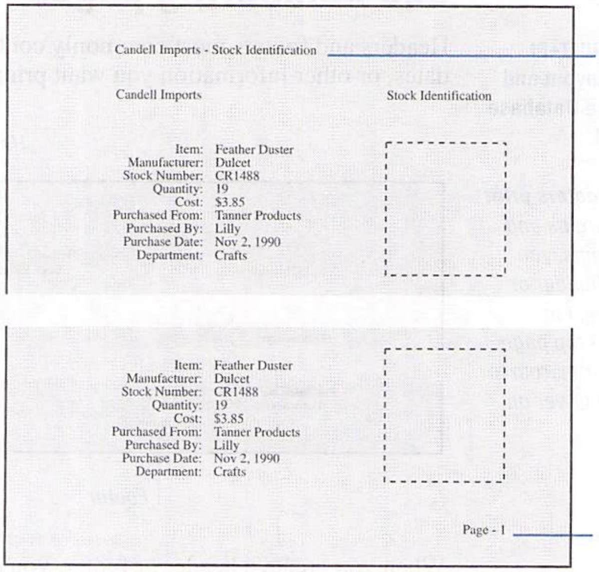
Headers and footers most commonly contain page numbers, report titles, dates, or other information you want printed on every page of a report.


Header
Printed 8/12/91
Candell Imports
Stock Identification
Item: Feather Duster
Manufacturer: Dulcet
Purchase Date: Nov 2, 1990
Department: Crafts
Page - 1
Footer

When you create a header or footer, you can use special codes to align text, print the date or time, print page numbers, and so on. The following table describes the codes you can use.

To	Type
Left align any characters that follow	&l
Right align any characters that follow	&r
Center any characters that follow	&c
Print the page number	&p
Print the filename	&f
Print the date in long format	&n
Print the current date	&d
Print the current time	&t
Print a single ampersand (&)	&&

The following illustration shows how you might use header and footer codes in a report.



Candell Imports - Stock Identification

Candell Imports Stock Identification

Item: Feather Duster
Manufacturer: Dulcet
Stock Number: CR1488
Quantity: 19
Cost: $3.85
Purchased From: Tanner Products
Purchased By: Lilly
Purchase Date: Nov 2, 1990
Department: Crafts

Item: Feather Duster
Manufacturer: Dulcet
Stock Number: CR1488
Quantity: 19
Cost: $3.85
Purchased From: Tanner Products
Purchased By: Lilly
Purchase Date: Nov 2, 1990
Department: Crafts

Page - 1

&l Candell Imports - Stock Identification

&r Page - &p

To create a header or footer

Alignment and country settings
Works automatically centers headers and footers unless you change the alignment. Works prints dates in the format, 03/15/91 and times in the format, 03:45 PM unless you use the Windows Control Panel to change the International date and time settings.

1 From the Edit menu, choose Headers & Footers.

2 In the Header and Footer boxes, type the text you want, including any special characters from the table following step 3.

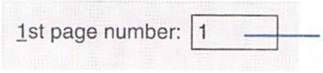
Example: To print a page number on every page, type **&p** in either the Header or Footer box.

3 Choose the OK button.

To change the starting page number

1 From the File menu, choose Page Setup & Margins.

2 In the 1st Page Number box, type the starting page number.



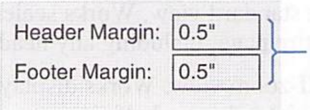
1st page number: 1

Specify the starting page number. Works numbers the pages sequentially, beginning with the number you specify.

3 Choose the OK button.

To change header and footer margins

1. From the File menu, choose Page Setup & Margins.
2. In the Header Margin and the Footer Margin boxes type new measurements.



Header Margin: 0.5"

Footer Margin: 0.5"

To print properly, header and footer margins must be smaller than the top and bottom page margins.

3. Choose the OK button.

To remove the header or footer from the first page

1. From the Edit menu, choose Headers & Footers.
2. Choose the No Header On 1st Page check box or the No Footer On 1st Page check box, or both.
3. Choose the OK button.

To remove headers or footers from an entire report

1. From the Edit menu, choose Headers & Footers.
2. If there is text in the Header box, highlight the text.
3. Press DEL.
4. Repeat steps 2 and 3 for the Footer box, if necessary.
5. Choose the OK button.

Previewing a report

You do not have to print a report to see how it will look. Instead, you can preview it using the Print Preview command.

In print preview, you can look at each page in three ways:

- In the standard view, Works scales down each page, and you can see an entire page, including any headers and footers.
- In half-zoom view, Works displays the text on each page approximately one-half size.
- In full-zoom view, Works displays the text and objects on each page full-size.

To preview a report

▶ On the Toolbar, click the Print Preview button.

Print Preview button

–or–

From the File menu, choose Print Preview.

Works opens the print preview window and displays the first page of the report.

Moving through a report and viewing pages in print preview

In print preview, you can view all the pages of your report, you can zoom (enlarge) pages in order to see more detail, and you can scroll zoomed pages in order to see any portion of them. The following table describes how to zoom-in and view document pages.

To	**With the mouse**	**On the keyboard**
Move to the next page	Click the Next button	Press PAGE DOWN
Move to the previous page	Click the Previous button	Press PAGE UP
Zoom-in to the next zoom level (half-zoom or full-zoom)	Click the Zoom In button –or– Click on the page	Press ALT+I
Zoom-in to full-zoom from standard view	Double click the page	Press ALT+I twice

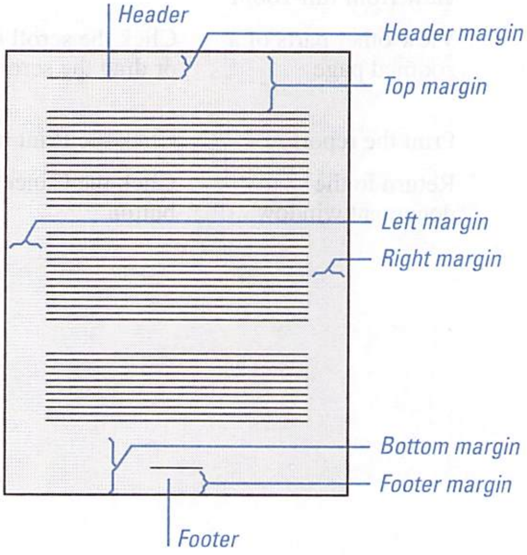
To	With the mouse	On the keyboard
Zoom-out to the previous level (half-zoom or standard view).	Click the Zoom Out button	Press ALT+O
Zoom-out to standard view from full-zoom	Double click the page	Press ALT+O twice
View other parts of a zoomed page	Click the scroll bars or drag the scroll box	Press the appropriate arrow key to scroll up, down, right, or left
Print the report	Click the Print button	Press ALT+P
Return to the document window	Click the Cancel button	Press ESC

Changing page and margin settings

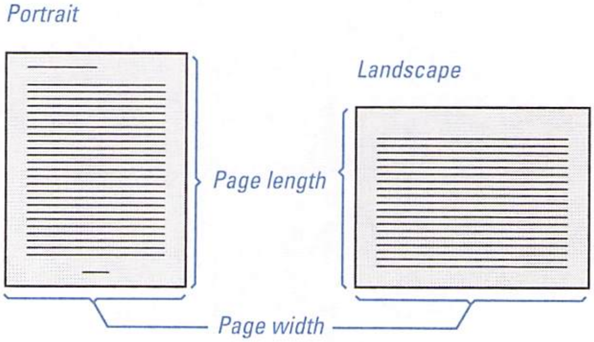
For a tutorial, press SHIFT+F1 and go to the "Page layout and printing lesson in the Database section of the tutorial.

Works remembers page and margin settings
When you change margin settings, Works remembers the settings. You don't have to change them again for the active report unless you want to change the way Works prints it.

Page and margin settings determine how Works prints your information on a page. For example, you can change page margins to make room for headers and footers or to leave space for a personal or company letterhead. The page margins you set affect every printed page.

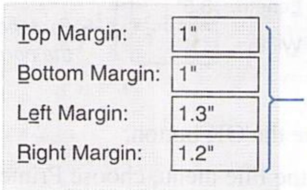

Header
Header margin
Top margin
Left margin
Right margin
Bottom margin
Footer margin
Footer

Works is preset to print on letter-size (8.5-by-11-inch) paper. If you use different-sized paper, you can change the page size to match. For example, you could print on legal-sized paper. You can also choose to print a report in landscape orientation.


Portrait
Landscape
Page length
Page width

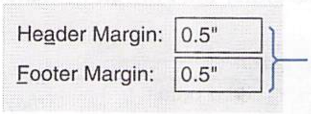
To change page setup and margin settings

1. From the File menu, choose Page Setup & Margins.
2. Type new measurements for any settings you want to change and choose the options you want to use.



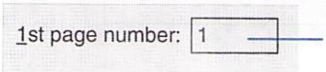
Top Margin: 1"
Bottom Margin: 1"
Left Margin: 1.3"
Right Margin: 1.2"

Adjust the size of a page's print area by increasing or decreasing the margin size.



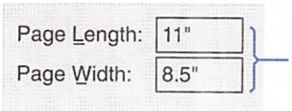
Header Margin: 0.5"
Footer Margin: 0.5"

To print properly, header and footer margins must be smaller than the top and bottom page margins.



1st page number: 1

Specify the starting page number. Works numbers the pages sequentially, beginning with the number you specify.



Page Length: 11"
Page Width: 8.5"

Works is preset to print on 8.5-by-11-inch paper. Change the page measurements if you use different size paper.

3. Choose the OK button.

Changing measurement units
You can change the unit of measurement when typing margin or page size by including the appropriate abbreviation after the spacing value—for example: 0.5" for inches, 1.26cm for centimeters, or 37pt for points.

Page size must match
The values in the Page Length and Page Width must match the paper size you set in the Printer Setup dialog box.

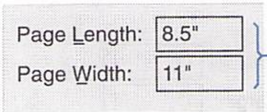
If you want…
To print only your report titles, labels, text, and summaries, without each record printing, choose the Print All But Record Rows check box.

To change the page orientation

Will your printer print sideways?
Not every printer can print sideways. If you're not sure whether your printer can print sideways, check your printer manual.

1 From the File menu, choose Page Setup & Margins.

2 In the Page Length and Page Width boxes, reverse the measurements.



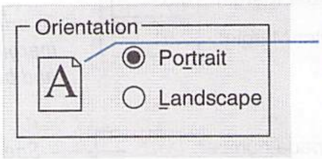
Page Length: 8.5"
Page Width: 11"

For landscape orientation, reverse the normal portrait measurements.

3 Choose the OK button.

4 From the File menu, choose Printer Setup.

5 Choose either the Portrait or Landscape option button.



Orientation
● Portrait
○ Landscape

In Portrait orientation, pages are longer than they are wide. In Landscape orientation, pages are wider than they are long.

6 Choose the OK button.

Printing a report

For a tutorial, press SHIFT+F1 and go to the "Page layout and printing lesson in the Database section of the tutorial.

Before printing, you should make sure your report is formatted correctly and organized the way you want it. The following table suggests things you may want to do before printing:

To	See page
Preview a report before printing it	358
Change fonts and font sizes	340
Add headers and footers	355

Important You can save time and paper if you use print preview to check your report before printing. Then, if necessary, adjust page margins, size, orientation, and so on. You can also change the starting page number. For information about all page and margin options, see "Changing page and margin settings" on page 360.

To print a report

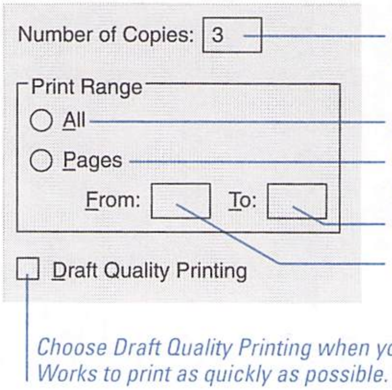
1 On the Toolbar, click the Print button.

Print button

–or–

From the File menu, choose Print.

2 Choose the options you want.



Number of Copies: 3

Print Range

○ All

○ Pages

From: To:

☐ Draft Quality Printing

Type the number of copies of the document you want Works to print.

Choose All to print the entire document.

Choose Pages if you want to print only a portion of the document.

Type the last page to print.

Type the first page to print.

Choose Draft Quality Printing when you want Works to print as quickly as possible.

3 Choose the OK button.

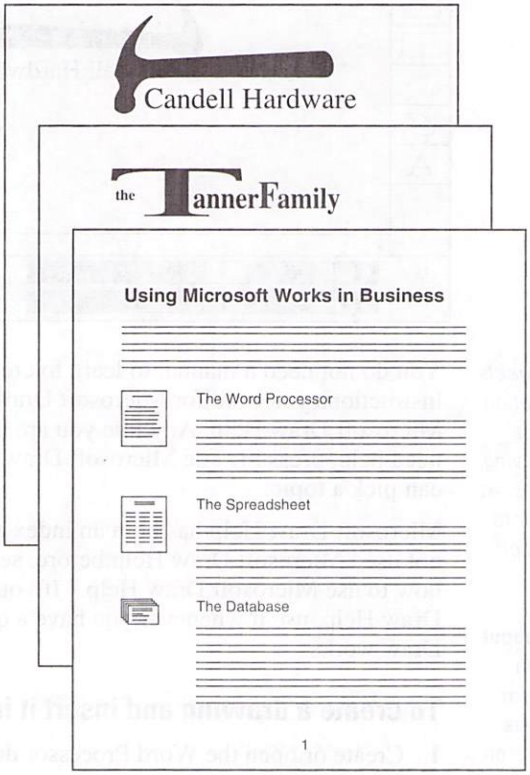
Want to print only a summary report?
Choose the Print All But Record Rows check box in the Page Setup & Margins dialog box if you want to print only your report titles, labels, text, and summaries, without each record printing also.

What is draft quality?
When you choose the Draft Quality Printing check box, Works does not print font styles (bold, italic, and underline).

Guide to Microsoft Draw

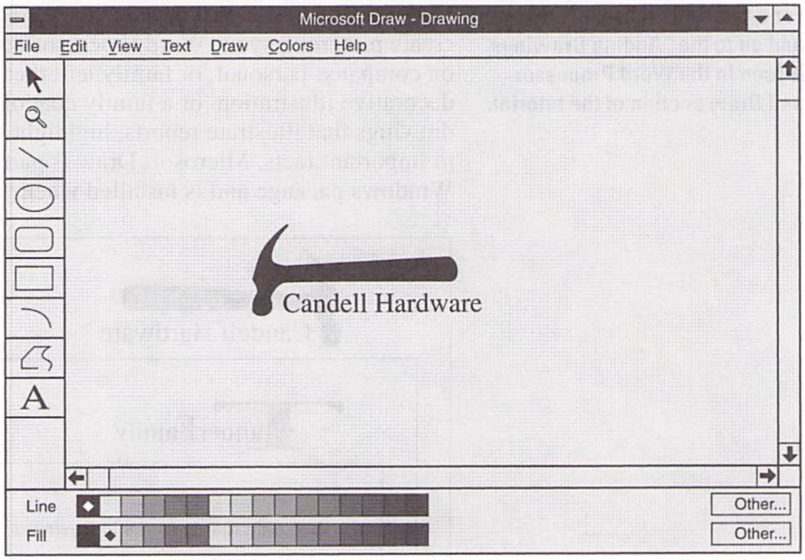
For a tutorial, press SHIFT+F1 and go to the "Adding Drawings" lesson in the Word Processor and Draw section of the tutorial.

Microsoft Draw for Windows is a drawing application you can use to create pictures in your Word Processor documents. Create drawings to use on company, personal, or family letterhead. Create a company logo, a decorative illustration, or a family coat of arms. You can also create drawings that illustrate reports, highlight section breaks, or draw attention to important facts. Microsoft Draw is part of the Microsoft Works for Windows package and is installed when you install Works.


Candell Hardware
the TannerFamily
Using Microsoft Works in Business
The Word Processor
The Spreadsheet
The Database
1

Creating a drawing

To create a drawing, you must first create or open a Word Processor document. You can then create as many drawings as you like.



Working with embedded objects
Microsoft Draw is an application that lets you create an object within Works, rather than having to leave your document and start a second application in order to create the object. This is called embedding.

For additional information about inserting drawings and other objects into a Word Processor document, see "Adding charts, drawings, and other objects" on page 31 in "Guide to the Word Processor."

You do not need a manual to learn to create your own illustrations: the instructions you need for Microsoft Draw are available through the Microsoft Draw Help. Anytime you are using Microsoft Draw and you need help, press F1. The Microsoft Draw Help index is displayed, and you can pick a topic.

Microsoft Draw Help has both an index and a search feature. If you have not used Microsoft Draw Help before, see the later procedure, "To learn how to use Microsoft Draw Help." If you are familiar with Microsoft Draw Help, use it whenever you have a question about how Microsoft Draw works.

To create a drawing and insert it in a document

1. Create or open the Word Processor document in which you want a drawing.
2. Move the insertion point to where you want the drawing.
3. From the Insert menu, choose Drawing.

   Works starts Microsoft Draw and displays the Microsoft Draw window.

4 Create your drawing.

If you need help, press F1. Microsoft Draw Help displays an index to the Help topics you can choose from.

5 When your drawing is finished, choose Exit And Return from the File menu.

Works inserts the drawing at the insertion point. When you save your document, your drawing is saved as part of it. If you want to change the drawing at any time, double-click it and Microsoft Draw starts again.

To learn to use Microsoft Draw Help

1 From the Help menu, choose Using Help.

2 Follow the instructions on the screen to learn about how to use Help.

Press F1 for Microsoft Draw Help
Anytime you are using Microsoft Draw, you can press F1 and pick a topic from the Microsoft Draw Help index.

Adding clip art to a document

Copying art between documents
After inserting art into a Word Processor document, you can copy the drawing to other locations in the same document or to other Word Processor documents using the Cut and Paste commands from the Edit menu.

Your Works disks contain a number of drawings you can use to illustrate text, create letterheads, draw attention to specific facts, or make a document look better.

To insert clip art into a document

1. Open or create the Word Processor document into which you want to insert the drawing.
2. Move the insertion point to where you want the drawing.
3. From the Insert menu, choose Drawing.

   Works starts Microsoft Draw.
4. From Microsoft Draw's File menu, choose Import Picture.

   Draw displays the Import Picture dialog box.
5. If necessary, change to the directory containing the clip art files.

   When you setup Works, the clip art provided by Works was installed in a directory below the WINWORKS directory called CLIPART. These files have the filename extension .WMF.
6. In the File Name box, type the name of the drawing you want to insert.
   –or–
   From the list of files, choose the drawing you want to insert.
7. Choose the OK button.

   Microsoft Draw displays the drawing you chose. You can make any changes you want using Microsoft Draw's commands.
8. From the File menu, choose Exit And Return.

   Microsoft Draw returns you to the Word Processor document, and the drawing is now part of the document.

   If you want to change the clip art once it is in your document, double-click the clip art in the Word Processor document to start Microsoft Draw.

Using drawings from other applications

You can use drawings and images created with other applications, such as Windows Paintbrush, by importing the images from these applications into Microsoft Draw and then inserting them into a Word Processor document.

To import a drawing from another application

__Creating an art file__
To create your own file of art, copy drawings into a Word Processor document. You can then open the document anytime and copy any of the art you have collected into another document.

1 Open or create the Word Processor document in which you want a drawing.

2 Move the insertion point to where you want the drawing.

3 From the Insert menu, choose Drawing.

Works starts Microsoft Draw and displays the Microsoft Draw window.

4 From Microsoft Draw's File menu, choose Import Picture.

Works lists any files containing drawings that you can import into Microsoft Draw. If the file you want is in another directory, choose that directory.

5 From the list of files, choose the filename of the drawing you want to import.

6 Choose the OK button.

Works displays the imported drawing.

7 Use Microsoft Draw to make any changes you want to the drawing.

8 From the File menu, choose Exit And Return to insert the drawing in the Word Processor document.

Spreadsheet and Database functions

To find out more about using functions in the Spreadsheet or the Database, see the "Entering a formula" on page 104 in "Guide to the Spreadsheet" or the "Using mathematical formulas and functions to create calculating fields" on page 264 in "Guide to the Database."

A function is a built-in equation you can use in a Microsoft Works for Windows spreadsheet or database. Works has 57 functions that do a wide range of calculations.

Functions save time in typing what might be a complex formula. For example, to compute the average value of the spreadsheet cells A5 through A15, you would type:

=AVG(A5:A15)

Similarly, you can use a named spreadsheet range in a function. For example:

=AVG(Sales)

Functions are most often used in spreadsheets, and this chapter uses many spreadsheet examples when explaining functions. For example, the function SUM is defined as:

SUM(*RangeReference0, RangeReference1,...*)

You can enter a range reference or a named range for *RangeReference.* For example, to total cells A1, A2, and A3, you would type:

=SUM(A1,A2,A3)
–or–
=SUM(A1:A3)

To total a range of cells named Deposit, you would type:

=SUM(Deposit)

Some functions are also useful in a database. When used in a database, a function applies only to fields within the same record. For example, to compute a student's average score from four test score fields, you would type:

=AVG(Test1, Test2, Test3, Test4)

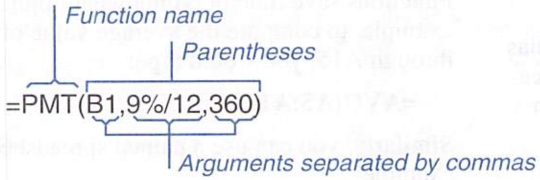
For each record in an inventory database, you can total the number of items in the warehouse (Warehouse field) and in the store (Store field) using the function formula:

SUM(Warehouse, Store)

You can find totals, averages, or perform other functions for an entire database field by creating a report. For more information, see "Guide to Database Reporting" on page 313.

Writing a function formula

Most functions consist of the function name, a set of parentheses, and arguments.

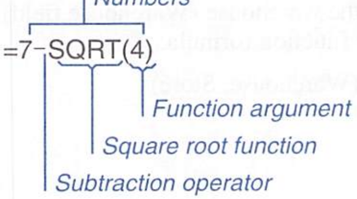

Function name
Parentheses
=PMT(B1,9%/12,360)
Arguments separated by commas

Most Works functions use one or more arguments—values that the function uses in its calculations. For instance, in the function SQRT(16), SQRT is the function and 16 is the argument. This formula produces 4, the square root of 16.

Functions and their arguments must be written in a particular way—called the function syntax. Some of the rules for function syntax are:

- An argument must be a number or expression that results in a number. This means that an argument can be a number, cell or range reference, another function, a field name, or any combination, such as B1/12.
- The arguments must be separated by commas.
- The arguments of a function must be inside parentheses.
- Some functions, such as COLS, can only use a range reference or field name as an argument. Some functions, such as FALSE( ), have no arguments.

You can also put a function inside any mathematical formula, along with arithmetic operators, operands (numbers or values), range or cell references, or field names. A formula can contain one or more Works functions.


Numbers
=7-SQRT(4)
Function argument
Square root function
Subtraction operator

ABS(*x*)

ABS gives the absolute (positive) value of *x*.

- =ABS(–2) *equals* 2
- =ABS(2) *equals* 2

ACOS(*x*)

ACOS gives the arccosine of *x*. The arccosine is the angle whose cosine is *x*. ACOS gives the size of the angle in radians. *X* must be in the range from –1 through 1. The angle will range from 0 (zero) radians (0 degrees) through π radians (180 degrees).

- =ACOS(–0.5) *equals* 2.094 (2π/3 radians)
- =ACOS(–0.5)*180/PI( ) *equals* 120 (degrees)

ASIN(*x*)

ASIN gives the arcsine of *x*. The arcsine is the angle whose sine is *x*. ASIN gives the size of the angle in radians. *X* must be in the range from –1 through 1. The angle will range from –π/2 radians (–90 degrees) throughπ/2 radians (90 degrees).

- =ASIN(–0.5) *equals* –0.524 (–π/6 radians)
- =ASIN(–0.5)*180/PI( ) *equals* –30 (degrees)

ATAN(*x*)

ATAN gives the arctangent of *x*. The arctangent is the angle whose tangent is *x*. ATAN gives the size of the angle in radians. The angle will range from –π/2 radians (–90 degrees) through π/2 radians (90 degrees).

- =ATAN(1) *equals* 0.785 (π/4 radians)
- =ATAN(1)*180/PI( ) *equals* 45 (degrees)

ATAN2(*x-coordinate,y-coordinate*)

ATAN2 gives the arctangent of an angle defined by *x*- and *y-coordinates*. The arctangent is the angle, in radians, determined by the point described by the *coordinates*. The angle will range from –π radians (180 degrees) to, but not including, π radians (180 degrees).

If x-coordinate is	And y-coordinate is	ATAN2 gives angle
Positive	Positive	Between 0 and π /2
Negative	Positive	Between π /2 and π
Negative	Negative	Between –π and –π /2
Positive	Negative	Between –π /2 and 0

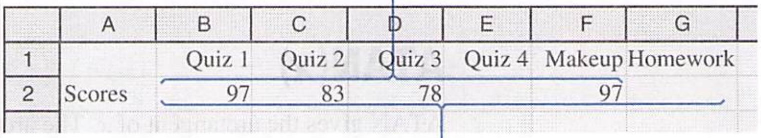
If both the *x-coordinate* and *y-coordinate* equal 0, ATAN2 gives the error value ERR.

- =ATAN2(1,1) *equals* 0.785 (π/4 radians)
- =ATAN2(–1,–1) *equals* –2.356 (–3π/4 radians)
- =ATAN2(–1,–1)*180/PI() *equals* –135 (degrees)

AVG(*RangeReference0, RangeReference1,...*)

AVG gives the average of values in *RangeReferences.*

RangeReferences may be numbers, cell references, range references, or formulas. In cell references, blank cells are treated as 0 (zero). In range references, blank cells are ignored. In all references, text is treated as 0.



The formula =AVG(B2:F2) equals 88 ignores the blank E2 cell when averaging the values in cells B2 through F2.

	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	

The formula =AVG(B2:F2,G2) equals 71 includes G2 when averaging the values in cells B2 through F2 and in cell G2.

CHOOSE(*Choice,Option0,Option1,...*)

CHOOSE uses *Choice* to select an *Option* from the list. For example, if the *Choice* is 0, CHOOSE selects *Option0;* if the *Choice* is 1, CHOOSE selects *Option1,* and so on.

If the *Choice* is less than 0 (zero) or greater than the number of options in the list, CHOOSE gives the error value ERR.

- If cell A1 contains the number 2, then:

  =CHOOSE(A1–1,10,20,30) *equals* 20

COLS(*RangeReference*)

For related information, see the ROWS function on page 390.

COLS gives the number of columns in *RangeReference.*

If the range B2:D5 is named Table, then:

- =COLS(Table) *equals* 3
- =COLS(B2:D5) *equals* 3

COS(*x*)

COS gives the cosine of *x; x* is an angle measured in radians.

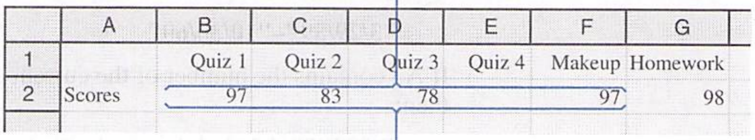
- =COS(1.047) *equals* 0.5
- =COS(60*PI()/180) *equals* 0.5 (cosine of 60 degrees)

COUNT(*RangeReference0, RangeReference1,...*)

COUNT gives the number of cells contained in *RangeReferences.* COUNT adds 1 for every cell that contains a number, formula, text, ERR, and N/A.

RangeReferences may be numbers, cell references, range references, or formulas. In range references, blank cells are ignored. In cell references, blank cells add 1 to the count.

The formula =COUNT(B2:F2) equals 4 does not count cell E2.



	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	98

The formula =COUNT(B2:F2,E2) equals 5 does count cell E2.

CTERM(*Rate,FutureValue,PresentValue*)

CTERM gives the number of compounding periods needed for an investment, earning a fixed *Rate* per compounding period, to grow from a *PresentValue* to a *FutureValue.*

Rate represents the interest rate for a single compounding period. For example, if your investment earns 12% annually and interest is compounded monthly, divide the annual interest rate by 12 to find the monthly *Rate,* or 1% per month.

- You put $1,000 into a savings account with a yearly interest rate of 8 3/4%. Interest is compounded monthly. How long does it take to double your investment?

  =CTERM(8.75%/12,2000,1000) *equals* 95.41 months (about eight years)

DATE(*Year,Month,Day*)

For related information, see the DAY MONTH YEAR function on page 377.

DATE gives a date number for the date specified by *Year, Month,* and *Day.* The date number is an integer ranging from 1 through 65534, representing the dates from January 1, 1900 through June 3, 2079.

Year must be a number ranging from 0 (1900) to 179 (2079). *Month* is generally a number ranging from 1 through 12, while *Day* is generally a number ranging from 1 through 31. If the month or day numbers are outside these ranges, DATE adjusts to the correct date. If *Year, Month,* and *Day* do not make up a valid date within Works' range of dates, DATE gives the error value ERR.

You can use DATE to enter a constant date in a cell by using a formula (for example, =DATE(60,10,30)). But it is easier and faster to type the date directly as 10/30/60 or Oct 30, 1960.

You can also use DATE within a larger formula. For example, to calculate the number of days between March 29, 1989 and October 30, 1960, you can use the formula =DATE(89,3,29)–DATE(60,10,30). But again, it is easier and faster to type the formula as

="3/29/89"–"10/30/60"

If A3 contains the number of the current quarter (1, 2, 3, or 4) of 1989, then:

- =DATE(89,A3*3+1,1) *equals* the date number of the first day of the next quarter
- =DATE(89,A3*3+1,1)–DATE(89,A3*3–2,1) *equals* the number of days in this quarter
- =DAY(DATE(89,7,1),7) *equals* 1 (day of the date of Saturday, July 1, 1989)

DAY(*DateNumber*)
MONTH(*DateNumber*)
YEAR(*DateNumber*)

DAY, MONTH, and YEAR give the number for the day, month, or year of the date specified by *DateNumber*. DAY gives an integer ranging from 1 through 31, MONTH gives an integer ranging from 1 through 12, and YEAR gives an integer ranging from 0 through 179.

DateNumbers use the integers 1 through 65534 to represent the dates January 1, 1900 through June 3, 2079. January 1, 1900 is date number 1, January 2, 1900 is date number 2, and so on through June 3, 2079, which is date number 65534.

- =DAY('4/15/89') *equals* DAY(31882) *equals* 15
- =MONTH('4/15/89') *equals* MONTH(31882) *equals* 4
- =YEAR('4/15/89') *equals* YEAR(31882) *equals* 89

DDB(*Cost,Salvage,Life,Period*)

For related information, see the SLN and SYD functions on pages 390 and 392.

DDB uses the double-declining balance method to find the amount of depreciation in a specific *Period.*

Cost is the amount you paid for the asset. *Salvage* is the amount you expect to obtain when you sell the asset at the end of its life. *Life* is the number of time periods (usually years) you expect the asset to be in use. *Period* is the period of time for which you want to find the depreciation amount.

DDB uses the following to compute depreciation for a given period:

$$\frac{(\text{Value*2})}{\text{Life}}$$

- You buy a tractor for $50,000. You expect the tractor to last 10 years, after which you could probably sell it for $8,000. The depreciation expense for the seventh year, using the double-declining balance method, is calculated by:

  =DDB(50000,8000,10,7) *equals* $2,621.44

ERR( )

ERR gives the error value ERR. You can use it to force a cell to display ERR whenever a specified condition exists. You can use ERR to find other cells whose formulas are dependent on the erroneous cell.

If A1 contains the number 0, then:

- =(IF(A1=0,ERR( ),A1)) *equals* ERR

EXP(*x*)

For related information, see the LN function on page 384.

EXP gives *e* to the power of *x*, where *e* is 2.71828..., the base number of natural logarithms. To compute powers of other bases, use the exponentiation operator (^). EXP is the inverse of LN.

- =EXP(1) *equals* 2.718... (the value of *e*)
- =EXP(LN(3)) *equals* 3

FALSE( )

For related information, see the TRUE function on page 394.

FALSE gives the logical value 0 (FALSE). You can use FALSE( ) instead of 0 (zero) to create more readable logical formulas.

If A1 contains the number 5, then:

- =IF(A1>10, TRUE( ),FALSE( )) *equals* =IF(A1>10,1,0) *equals* 0

FV(*Payment,Rate,Term*)

FV gives the future value of an ordinary annuity of equal *Payment*s, earning a fixed interest *Rate* per Term, compounded over several Terms (*Term*).

Works assumes that the first *Payment* occurs at the end of the first period. Works uses the following formula to calculate the future value of an ordinary annuity:

$$\frac{\text{Payment}*((1+\text{Rate})^{\text{Term}}-1)}{\text{Rate}}$$

- You plan on depositing $1,500 into your savings account each year for the next eight years. The account earns 8.75% interest, compounded annually. How much money will be in the account at the end of eight years?

  =FV(1500,8.75%,8) *equals* $16,393.61

- If the first payment occurs at the beginning of the first period (an annuity due), then the value of your account at the end of eight years is calculated by:

  =FV(1500,8.75%,8)*(1+8.75%) *equals* $17,828.05

HLOOKUP(*LookupValue, RangeReference,RowNumber*)

VLOOKUP(*LookupValue, RangeReference,ColumnNumber*)

For related information, see the INDEX function on page 381.

HLOOKUP and VLOOKUP find an entry in a table.

HLOOKUP searches the top row of *RangeReference* until it finds the number that matches *LookupValue.* Then it goes down the column the number of rows indicated by *RowNumber* to get the entry.

Arrange the numbers in the top row in ascending order. Works searches the top row for the largest number that is less than or equal to *LookupValue.*

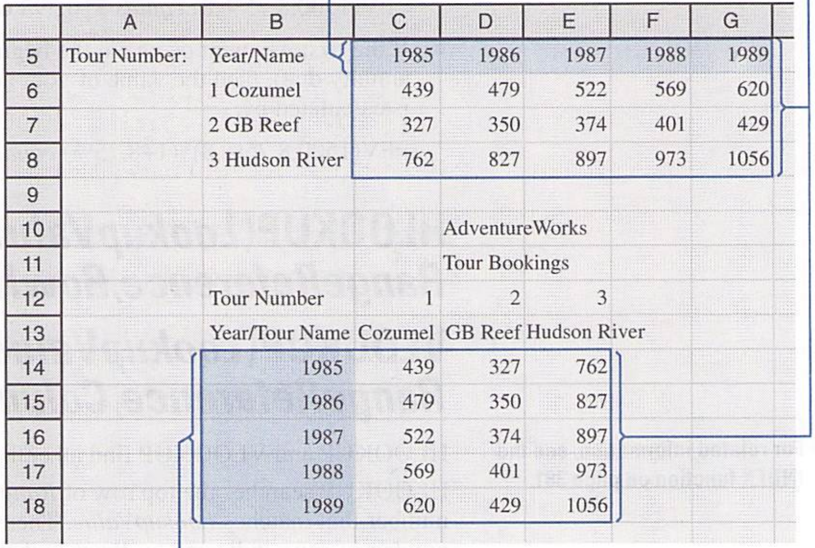
VLOOKUP works in a similar way to HLOOKUP. It searches the left-most column of *RangeReference* until it finds the number that matches the *LookupValue.* Then it goes to the right by the number of columns indicated by *ColumnNumber* to get the entry.

Arrange the numbers in the left column in ascending order. Works searches the left column for the largest number that is less than or equal to *LookupValue.*

If *ColumnNumber* or *RowNumber* is negative, or is greater than or equal to the number of rows or columns in a *RangeReference,* Works gives the error value ERR.

HLOOKUP searches for the LookupValue *in the top row of* RangeReference *and then goes down by the* NumberOfRows.

RangeReference *is a range that contains both the* LookupValues *and the data.*



	A	B	C	D	E	F	G
5	Tour Number:	Year/Name	1985	1986	1987	1988	1989
6		1 Cozumel	439	479	522	569	620
7		2 GB Reef	327	350	374	401	429
8		3 Hudson River	762	827	897	973	1056
9							
10				AdventureWorks			
11				Tour Bookings			
12		Tour Number	1	2	3		
13		Year/Tour Name	Cozumel	GB Reef	Hudson River		
14		1985	439	327	762		
15		1986	479	350	827		
16		1987	522	374	897		
17		1988	569	401	973		
18		1989	620	429	1056		

VLOOKUP searches for the LookupValue *in the left column of* RangeReference *and then goes to the right by the* NumberOfColumns.

- =HLOOKUP(1987,C5:G8,2) *equals* 374 (cell E7)
- =HLOOKUP(1986.5,C5:G8,0) *equals* 1986 (cell D5)
- =VLOOKUP(1987,B14:E18,2) *equals* 374 (cell D16)
- =VLOOKUP(B2,B14:E18,B1) *equals* 762 (cell E14)
- =VLOOKUP(1986,C5:G8,200) *equals* ERR

HOUR(*TimeNumber*)
MINUTE(*TimeNumber*)
SECOND(*TimeNumber*)

For related information, see the TIME function on page 393.

HOUR, MINUTE, and SECOND give the number for the hour, minute, or second of the time represented by *TimeNumber*. HOUR gives an integer ranging from 0 through 23. MINUTE and SECOND give integers ranging from 0 through 59. *TimeNumber* should range from 0 through 0.999.

TimeNumber uses the decimal fractions 0 through 0.999 to represent the times 12:00:00 A.M. through 11:59:59 P.M.

- =HOUR('16:48:30') *equals* HOUR(0.70035) *equals* 16
- =MINUTE('16:48:30') *equals* MINUTE(0.70035) *equals* 48
- =SECOND('16:48:30') *equals* SECOND(0.70035) *equals* 30

IF(*Condition,ValueIfTrue,ValueIfFalse*)

IF determines whether *Condition* is true or false, then gives either *ValueIfTrue* or *ValueIfFalse.*

If A1 contains the number 20, then:

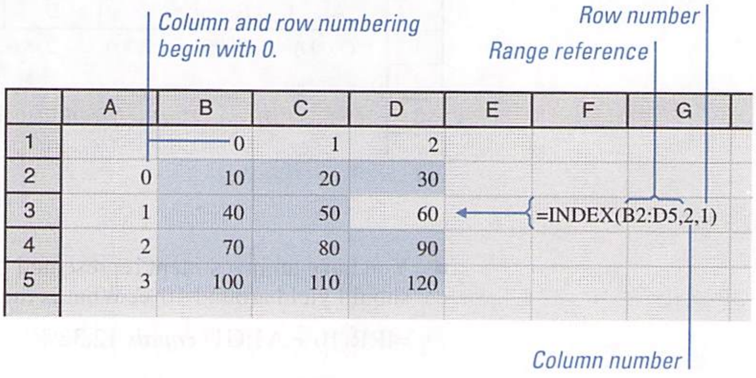
- =IF(A1>10,B1,C1) *equals* the value in B1
- =IF(A1=0,ERR(),A1/100) *equals* 0.2

INDEX(*RangeReference,Column,Row*)

For related information, see the HLOOKUP VLOOKUP function on page 379.

INDEX gives the value in a cell in *RangeReference* at the intersection of *Column* and *Row.*

If *Column* or *Row* is negative, or is greater than or equal to the number of rows or columns in *RangeReference,* Works gives the error value ERR.



	A	B	C	D	E	F	G
1		0	1	2			
2	0	10	20	30			
3	1	40	50	60			
4	2	70	80	90			
5	3	100	110	120			

- =INDEX(B2:D5,2,1) *equals* 60 (cell D3)
- =INDEX(B2:D5,1,2) *equals* 80 (cell C4)
- =INDEX(B2:D5,0,0) *equals* 10 (cell B2)
- =INDEX(B2:D5,3,4) *equals* ERR
- =INDEX(B2:D5,–1,–1) *equals* ERR

INT(*x*)

INT gives the integer part of *x*. INT deletes the digits to the right of the decimal point without rounding to the nearest integer. (Use ROUND to round *x* to the nearest integer.)

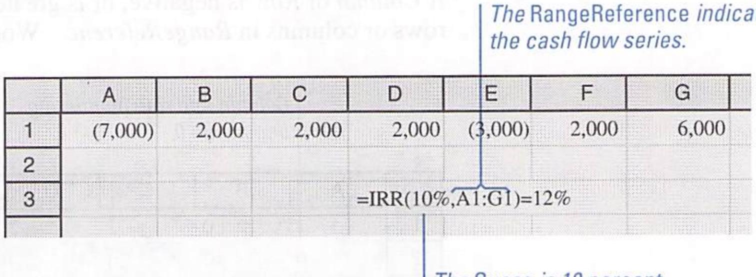
- =INT(8.9) *equals* 8
- =INT(–8.9) *equals* –8

IRR(*Guess,RangeReference*)

IRR gives the internal rate of return for the cash flow series in *RangeReference.* The internal rate of return is the interest rate that gives the cash flow series a net present value of 0 (zero).

IRR uses an iterative technique that can have more than one solution. IRR gives an ERR error value if the computations do not converge to within 0.0000001 after 20 iterations.

You enter a *Guess* to tell IRR where to begin. Enter a different *Guess* if Works cannot determine the IRR. Usually, a starting value between 0 (zero) and 1 yields a meaningful result.



The RangeReference *indicates the cash flow series.*

	A	B	C	D	E	F	G
1	(7,000)	2,000	2,000	2,000	(3,000)	2,000	6,000
2							
3				=IRR(10%,A1:G1)=12%			

The Guess *is 10 percent.*

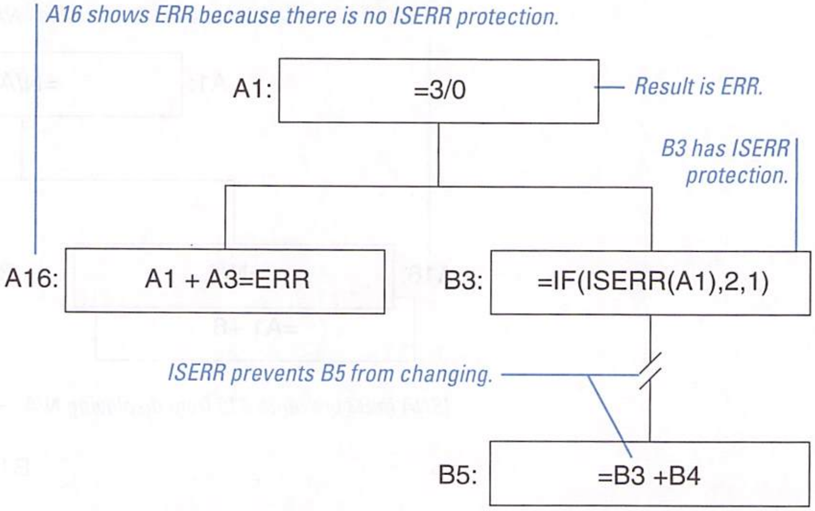
- You have an investment represented by cash flow numbers above that should yield around 10%. What is the actual internal rate of return?

  =IRR(10%,A1:G1) *equals* 12.32%

ISERR(*x*)

ISERR gives the logical value 1 (TRUE) if *x* is the error value ERR. Otherwise, it gives the logical value 0 (FALSE).

Use ISERR to test for errors in your spreadsheet. As the diagram shows, ISERR can be used to prevent errors from flowing to other related cells.


A16 shows ERR because there is no ISERR protection.
A1:
=3/0
Result is ERR.
B3 has ISERR protection.
A16:
A1 + A3=ERR
B3:
=IF(ISERR(A1),2,1)
ISERR prevents B5 from changing.
B5:
=B3 +B4

If A1 contains the error value ERR:

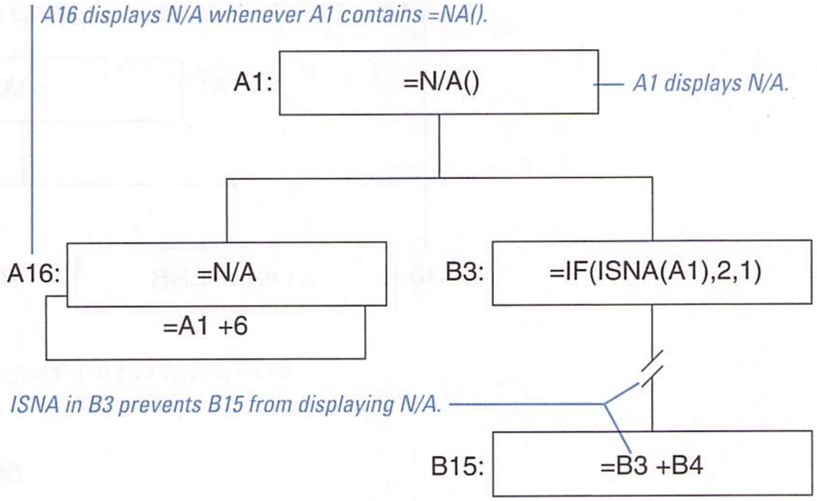
- =IF(ISERR(A1),2,1) *equals* 2
- =ISERR(3/0) *equals* 1

ISNA(*x*)

For related information, see the NA function on page 386.

ISNA gives the logical value 1 (TRUE) if *x* is the value N/A. Otherwise, it gives the logical value 0 (FALSE).

Use ISNA to test for N/A values in your spreadsheet. As the diagram shows, ISNA can be used to prevent N/A values from flowing to other cells.


A16 displays N/A whenever A1 contains =NA().
A1:
=N/A()
A1 displays N/A.
A16:
=N/A
=A1 +6
B3:
=IF(ISNA(A1),2,1)
ISNA in B3 prevents B15 from displaying N/A.
B15:
=B3 +B4

If A1 contains the value N/A, then:

- =IF(ISNA(A1),2,1) *equals* 2

LN(x)

For related information, see the EXP function on page 378 and the LOG function below.

LN gives the natural logarithm of *x*. Natural logarithms use the mathematical constant *e*, 2.71828..., as a base. *X* must be a positive number.

- =LN(2.7182818) *equals* LN(EXP(1)) *equals* 1
- =LN(EXP(3)) *equals* 3
- =LN(8)/LN(2) *equals* 3 (the base 2 logarithm of 8)

LOG(*x*)

For related information, see the LN function above.

LOG gives the base 10 logarithm of *x*. *X* must be a positive number. The inverse of LOG is exponentiation.

- =LOG(10) *equals* 1
- =LOG(100000) *equals* LOG(1E5) *equals* 5
- =LOG(8)/LOG(2) *equals* 3 (the base 2 logarithm of 8)

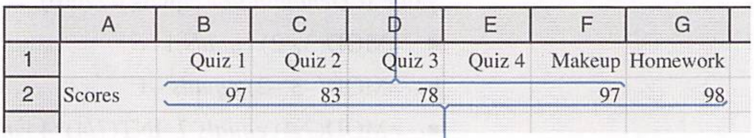
MAX(*RangeReference0, RangeReference1,...*)

For related information, see the MIN function below.

MAX gives the largest number contained in *RangeReferences.*

RangeReferences may be numbers, cell references, range references, or formulas. In range references, blank cells are ignored. In cell references, blank cells are treated as 0 (zero). In all references, text is treated as 0 (zero).

The formula =MAX(B2:F2) equals 97 ignores cell E2 when calculating which is the maximum value cells B2 through F2.



	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	98

The formula =MAX(B2:G2,100) equals 100.

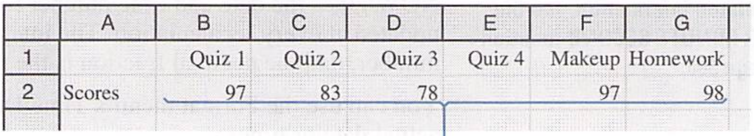
- =MAX(B2:F2) *equals* 97
- =MAX(B2:F2,G2,90) *equals* 98

MIN(*RangeReference0, RangeReference1,...*)

For related information, see the MAX function above.

MIN gives the smallest number contained in *RangeReferences.*

RangeReferences may be numbers, cell references, range references, or formulas. In range references, blank cells are ignored. In cell references, blank cells are treated as 0 (zero). In all references, text is treated as 0 (zero).



	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	98

The formula =MIN(B2:F2,G2,70) equals 70 ignores cell E2 when calculating the minimum values among the cell references and other values in the formula.

MINUTE(*TimeNumber*)

For related information, see the HOUR MINUTE SECOND function on page 380.

MINUTE gives the number for the minute represented by *TimeNumber.*

MOD(*Numerator,Denominator*)

MOD gives the remainder (modulus) of:

$$\frac{\text{Numerator}}{\text{Denominator}}$$

The remainder has the same sign as *Numerator.* MOD gives an ERR error value if *Denominator* equals 0 (zero).

- =MOD(3,–2) *equals* 1
- =MOD(–3,–2) *equals* –1
- =MOD(7,4) *equals* 7–INT(7/4)*4 *equals* 3

MONTH(*DateNumber*)

For related information, see the DAY MONTH YEAR function on page 377.

MONTH gives the number for the month represented by *DateNumber.*

NA( )

For related information, see the ISNA function on page 383.

NA gives the numeric value N/A. You can use NA( ) to indicate that information is not available.

If A1 contains the number 0, then:

- =IF(A1=0,NA( ),A1) *equals* N/A

NOW( )

For related information, see the HOUR MINUTE SECOND function on page 380.

NOW gives the date and time number for the current date and time. It is updated at every recalculation. The integer portion of NOW( ) is the date number, and the decimal fraction is the time number.

You can use the Format menu's Time/Date command to display the actual date or time.

If the current date and time is 4:48:00 P.M. on 4/15/89, then:

- =NOW( ) *equals* 32613.
- =INT(NOW( )) *equals* 32613 (current date number)
- =HOUR(NOW( )) *equals* 16 (current hour)

NPV(*Rate,RangeReference*)

For related information, see the PV function on page 388.

NPV gives the net present value of a series of cash flow payments, represented by numbers in *RangeReference*, discounted at a fixed *Rate* per period.

Rate represents the interest rate you want to use to discount each period. For example, if you have a 12% annual interest rate but want to discount on a monthly basis, divide the annual interest rate by 12 to find the monthly *Rate;* in this case, 1% per month.

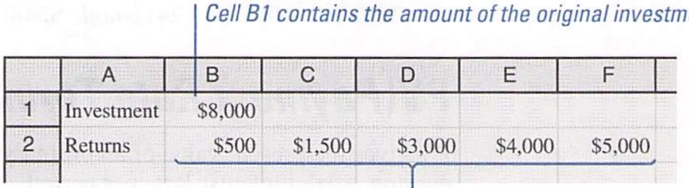
RangeReference must be the reference of a single cell or of part of a single row or column. It may not be a range with more than one row and more than one column.

Works assumes that payments occur at the end of periods of equal length. To find the net present value of a cash flow series whose first payment occurs at the beginning of the periods, you must add the amount of the first payment to the net present value of the subsequent payments.

Works uses this formula to find the net present value:

$$\text{NPV} = \sum_{i=1}^{n} \frac{\text{Payment [i]}}{(1+\text{Rate})^{i}}$$

Cell B1 contains the amount of the original investment.



	A	B	C	D	E	F
1	Investment	$8,000				
2	Returns	$500	$1,500	$3,000	$4,000	$5,000

Cells B2:F2 contain the expected monthly returns from the investment.

- You are interested in a rental contract that promises a 10% yield and monthly payments at the end of each month for the next five months. Cells B2:F2 contain the expected monthly payments. To calculate how much you should pay for the investment:

  =NPV(10%,B2:F2)–B1 *equals* $1,784.82

- Assume the monthly payments are made at the beginning of the month:

  =500+NPV(10%,C2:F2)–B1 *equals* $2,763.30

PI()

PI() gives the number 3.14159..., an approximation of the mathematic constant π.

- =COS(60*PI()/180) *equals* 0.5 (cosine of 60 degrees)

PMT(*Principal,Rate,Term*)

PMT gives the periodic payment for a loan or an investment of *Principal* based on a fixed interest *Rate* per compounding period over a given *Term.* Works assumes that payments occur at the end of periods of equal length.

Rate represents the interest rate for a single compounding period. For example, for a 12% loan with monthly payments, divide the annual interest rate by 12 to find the monthly *Rate,* or 1% per month. Works uses the following formula to calculate the periodic payment:

$$\frac{\text{Present Value} * \text{Rate}}{(1-(1+\text{Rate})^{-\text{Term}})}$$

- You want to buy a car that requires a $12,000 loan at 9% interest per year. What would the payments be if you tried to pay off the loan with 24 monthly installments?

  =PMT(12000,9%/12,24) *equals* $548.22

PV(*Payment,Rate,Term*)

PV gives the present value of an ordinary annuity of equal *Payments,* earning a fixed interest *Rate* per period, over several periods (*Term*).

Works assumes that the first *Payment* occurs at the end of the first period. Works uses the following formula to calculate the present value of an ordinary annuity:

$$\text{PV} = \frac{\text{Payment} * (1-(1+\text{Rate})^{-\text{Term}})}{\text{Rate}}$$

(Rate not equal to 0 (zero))

$$\text{PV} = \text{Payment}*\text{Term}$$

(Rate equal to 0 (zero))

- You are to inherit $1,500 from your aunt's estate at the end of each year for the next 10 years. You think that the annual inflation rate over the next 10 years will be 9%. The value of your inheritance in today's dollars is:

  =PV(1500,9%,10) *equals* $9626.49

RAND( )

RAND gives a random number from 0 (zero) up to, but not including, 1. A random number is generated every time the spreadsheet is recalculated.

- =RAND()*10+1 *equals* a random number between 1 and 11, excluding 11
- =INT(RAND()*100) *equals* a random integer from 0 through 99

RATE(*FutureValue, PresentValue,Term*)

RATE gives the fixed interest rate per compounding period needed for an investment of *PresentValue* to grow to a *FutureValue* over several compounding periods (*Terms*).

Works uses the following formula to calculate the rate:

$$\text{RATE} = \left(\frac{\text{FutureValue}}{\text{PresentValue}}\right)^{\frac{1}{\text{Term}}} - 1$$

- A limited partnership plans to buy an apartment building for $750,000 with the expectation of selling it for $1,500,000 in six years. The annual rate of return of the investment is:

  =RATE(1500000,750000,6) *equals* 12.25%

ROUND(*x,NumberOfPlaces*)

ROUND rounds *x* to the specified *NumberOfPlaces* to the left or right of the decimal point.

If the *NumberOfPlaces* is positive, *x* is rounded to the number of decimal places to the right of the decimal point. If the *NumberOfPlaces* is 0 (zero), *x* is rounded to the nearest integer. If the *NumberOfPlaces* is negative, Works rounds to the number of places to the left of the decimal point.

The NumberOfPlaces can range from –14 to 14.

- =ROUND(2.15,1) *equals* 2.2
- =ROUND(2.149,1) *equals* 2.1
- =ROUND(–1.475,2) *equals* –1.48
- =ROUND(3.1416,0) *equals* 3
- =ROUND(891,–2) *equals* 900

ROWS(*RangeReference*)

For related information, see the COLS function on page 375.

ROWS gives the number of rows in *RangeReference.*

If the range B2:D5 is named Table, then:

- =ROWS(Table) *equals* 4
- =ROWS(B2:D5) *equals* 4

SECOND(*TimeNumber*)

For related information, see the HOUR MINUTE SECOND function on page 380.

SECOND gives the number for the second represented by *TimeNumber.*

SIN(*x*)

SIN gives the sine of *x; x* is an angle measured in radians.

- =SIN(1.047) *equals* 0.866
- =SIN(60*PI()/180) *equals* 0.866

SLN(*Cost,Salvage,Life*)

For related information, see the DDB and SYD functions on pages 377 and 392.

SLN uses the straight-line depreciation method to find the amount of depreciation in one period.

Cost is the amount you paid for the asset. *Salvage* is the amount you expect to obtain when you sell the asset at the end of its life. *Life* is the number of periods (usually measured in years) you expect the asset to be in use.

SLN uses the following to compute depreciation for a given period:

$$\text{SLN} = \frac{\text{Cost} - \text{Salvage}}{\text{Life}}$$

- You buy a tractor for $50,000. You expect the tractor to last 10 years, after which you could probably sell it for $8,000. The depreciation expense for each year using the straight-line method is calculated by:

  =SLN(50000,8000,10) *equals* $4200

SQRT(*x*)

SQRT gives the square root *x*. If *x* is negative, Works gives the error value ERR.

- =SQRT(16) *equals* 4

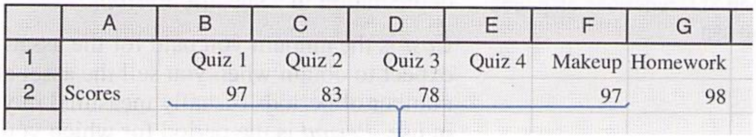
STD(*RangeReference0, RangeReference1,...*)

STD gives the population standard deviation of *RangeReferences.*

RangeReferences may be numbers, cell references, range references, or formulas. In range references, blank cells are ignored. In cell references, blank cells are treated as 0 (zero). In all references, text is treated as 0 (zero).

The standard deviation of a sample of the population is given by the following formula:

STD(RangeReferences)*SQRT(COUNT(RangeReferences)/(COUNT(RangeReferences)-1))



	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	98

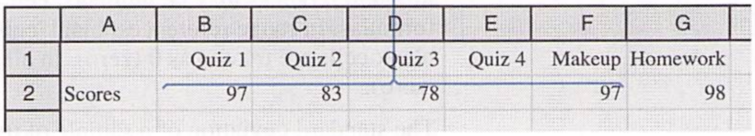
The formula =STD(B2:F2) equals 8.43 ignores cell E2 when calculating the standard derivation of the range B2 through F2.

- =STD(B2:F2) *equals* 8.43

SUM(*RangeReference0, RangeReference1,...*)

SUM gives the total of all values in *RangeReferences.*

RangeReferences may be numbers, cell references, range references, or formulas. In range references, blank cells are ignored. In cell references, blank cells are treated as 0 (zero).



	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	98

The formula =SUM(B2:F2) equals 355 ignores cell E2 when calculating the sum of the range B2 through F2.

SYD(*Cost,Salvage,Life,Period*)

For related information, see the DDB and SLN functions on pages 377 and 390.

SYD uses the sum-of-the-years-digits method to find the amount of depreciation in a specific *Period.*

Cost is the amount you paid for the asset. *Salvage* is the amount you expect to obtain when you sell the asset at the end of its life. *Life* is the number of periods (usually measured in years) you expect the asset to be in use. *Period* is the period for which you want to find the depreciation.

The formula to compute SYD for a given period is:

$$\text{SYD} = \frac{(\text{Cost} - \text{Salvage}) * (\text{Life} - \text{Period} + 1)}{\left(\frac{\text{Life} * (\text{Life} + 1)}{2}\right)}$$

- You buy a tractor for $50,000. You expect the tractor to last 10 years, after which you could probably sell it for $8,000. The depreciation expense for the seventh year using the sum-of-the-years-digits method is calculated by:

  =SYD(50000,8000,10,7) *equals* $3,054.55

TAN(*x*)

For related information, see the ATAN and ATAN2 functions on page 373.

TAN gives the tangent of *x*. *X* is an angle measured in radians.

- =TAN(0.785) *equals* 1
- =TAN(45*PI()/180) *equals* 1

TERM(*Payment,Rate,FutureValue*)

TERM gives the number of compounding periods necessary for a series of equal *Payments*, earning a fixed interest *Rate* per period, to grow to a *FutureValue*.

Works uses the following formula to calculate the future value of an ordinary annuity:

$$\text{TERM} = \frac{\text{LN}\left(1 + \left(\frac{\text{FutureValue} * \text{Rate}}{\text{Payment}}\right)\right)}{\text{LN}\,(1 + \text{Rate})}$$

(Rate not equal to 0 (zero))

$$\text{TERM} = \frac{\text{FutureValue}}{\text{Payment}}$$

(Rate equal to 0 (zero))

- Every month you put $200 into a savings account earning 8 3/4% interest, compounded monthly. How long will it take to accumulate $5,000?

  =TERM(200,8.75%/12,5000) *equals* 23.05 (months)

TIME(*Hour,Minute,Second*)

For related information, see the HOUR MINUTE SECOND function on page 380.

TIME gives a time number for the time specified by *Hour, Minute,* and *Second.* The time number is a fraction ranging from 0.0 through 0.999, representing times from 0:00:00 or 12:00:00 P.M. through 23:59:59 or 11:59:59 P.M.

Hour is generally a number ranging from 0 through 23. *Minute* and *Second* are generally numbers ranging from 0 through 59. If *Minute* or *Second* are outside the range of 0 through 59, TIME adjusts to the correct time.

- =TIME(16,48,0) *equals* 0.7 (time number of 4:48:00 P.M.)
- =(TIME(16,48,0)–TIME(12,0,0))*24*60 *equals* 288 (minutes between 4:48 P.M. and 12:00 P.M.)

TRUE( )

For related information, see the FALSE function on page 378.

TRUE gives the logical value 1(TRUE). You can use TRUE( ) instead of 1 to create more readable logical formulas.

If A1 contains the number 20, then:

- =IF(A1>10, TRUE( ),FALSE( )) *equals* =IF(A1>10,1,0) *equals* 1

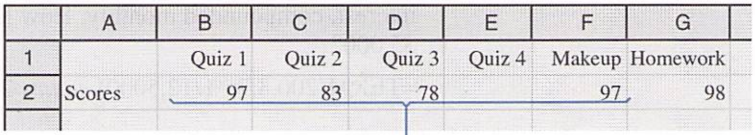
VAR(*RangeReference0, RangeReference1,...*)

VAR calculates the variance of the numbers in *RangeReferences.*

RangeReferences may be numbers, cell references, range references, or formulas. In range references, blank cells are ignored. In cell references, blank cells are treated as 0 (zero). In all references, text is treated as 0.

The variance of a sample of the population is given by the formula:

VAR(RangeReferences)*COUNT(RangeReferences)/
(COUNT(RangeReferences)–1)



	A	B	C	D	E	F	G
1		Quiz 1	Quiz 2	Quiz 3	Quiz 4	Makeup	Homework
2	Scores	97	83	78		97	98

The formula =VAR(B2:F2) equals 71.18 ignores the cell E2 when calculating the variance within the range B2 through F2.

For information, see the HLOOKUP VLOOKUP function on page 379.

VLOOKUP

YEAR(*DateNumber*)

For related information, see the DAY MONTH YEAR function on page 377.

YEAR gives the number of the year represented by *DateNumber.*

Extended characters

Your computer's keyboard does not display all the characters you can type in a document. For example, you can type ¼, ¿, ¢, and §. These characters, which are not on your keyboard, are called extended characters.

Extended characters don't print or display properly?
Some printers and other applications might not be able to produce the same characters as Works, or they may use different codes for the characters.

You type an extended character by typing its numeric code or value. The following table lists the extended characters and the values you type to produce them.

To insert an extended character

1. Move the insertion point to where you want the extended character.
2. Press NUM LOCK to turn on Num Lock.
3. Hold down ALT and, on your computer's numeric keypad, type the value of the character you want to insert.

   Example: To insert ¼, hold down ALT and type **0188**
4. Release ALT.

List of characters
This table lists in the left column the number you type to display or print the character in the right column.

128	Ç	151	ù	178	^{2}	228	ä
129	ü	152	ÿ	180	´	229	å
130	é	153	Ö	181	µ	230	æ
131	â	154	Ü	182	¶	231	ç
132	ä	155	¢	183	•	232	è
133	à	156	£	184	¸	233	é
134	å	157	¥	186	º	234	ê
135	ç	160		187	»	235	ë
136	ê	161	¡	188	1/4	236	ì
137	ë	162	¢	189	1/2	237	í
138	è	163	£	191	¿	238	î
139	ï	164	¤	196	Ä	239	ï
140	î	165	¥	197	Å	241	ñ
141	ì	166	¦	198	Æ	242	ò
142	Ä	167	§	199	Ç	243	ó
143	Å	170	ª	201	É	244	ô
144	É	171	«	209	Ñ	246	ö
145	æ	172	¬	214	Ö	249	ù
146	Æ	173	-	220	Ü	250	ú
147	ô	174	r	223	ß	251	û
148	ö	175	¯	224	à	252	ü
149	ò	176	°	225	á	255	ÿ
150	û	177	±	226	â		

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Microsoft® Works for Windows™ Quick Reference

Microsoft®

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Redmond, WA 98052-6399

All Works for Windows commands can be carried out using keys on the keyboard. The most commonly used keyboard shortcuts are listed in the following tables. For a comprehensive list of all keyboard shortcuts, press ALT+H to open the Help menu, and then press K to choose the "Keyboard shortcuts" topic.

Getting Help or a lesson

Open Help	F1
Start a lesson	SHIFT+F1

Switching between windows

To next window	CTRL+F6
To previous window	CTRL+SHIFT+F6
Open Task Manager	CTRL+ESC

Closing windows

Close active window	CTRL+F4
Quit Works	ALT+F4

Choosing commands

Activate the menu bar	ALT or F10
Open a menu	Underlined letter in menu name
Choose a command	Underlined letter in command name

Choosing options in a dialog box

Move to next option	TAB
Move to previous option	SHIFT+TAB
Open list box	ALT+DOWN ARROW
Choose an option	ALT+underlined letter in option name
Confirm all options	ENTER
Cancel and close dialog box	ESC

Moving and highlighting

Right, left, down, or up	RIGHT, LEFT, DOWN, or UP ARROW
One screen down	PAGE DOWN
One screen up	PAGE UP
Beginning of line or row	HOME
End of line or row	END
Beginning of document	CTRL+HOME
End of document	CTRL+END
To a bookmark or range	F5
To next bookmark or range	SHIFT+F5
Begin highlighting text or range	SHIFT+any arrow key

Undoing

Undo last change in Word Processor	ALT+BACKSPACE
Remove highlight	Any arrow key
Remove font style	CTRL+SPACEBAR

Formatting

Bold	CTRL+B
Italic	CTRL+I
Underline	CTRL+U
Center	CTRL+E
Left align	CTRL+L
Right align	CTRL+R
Open Font box	CTRL+F
Open Font Size box	CTRL+Z
In Spreadsheet:	
Comma format	CTRL+COMMA
Percent format	CTRL+5
Currency format	CTRL+4
In Word Processor:	
Justify paragraph	CTRL+J
Hanging indent	CTRL+H
Undo hanging indent	CTRL+G
Nested indent	CTRL+N
Undo nested indent	CTRL+M
Space before a paragraph	CTRL+O
No space before a paragraph	CTRL+0 (ZERO)

Making changes

Cut	CTRL+X or SHIFT+DEL
Copy	CTRL+C or CTRL+INS
Paste	CTRL+V or SHIFT+INS
Delete	DEL
In the formula bar:	
Activate the formula bar	F2
Confirm formula bar change	ENTER
Cancel formula bar change	ESC
In Spreadsheet:	
Autosum™	CTRL+M

Repeating commands

Repeat last format	SHIFT+F7
Repeat last search	F7
Repeat last paste	CTRL+V

Printing

Print preview	ALT+F+V
Print	CTRL+P

Saving your work

Save a document	CTRL+S

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